

Written Comments Received on Tentative Order No. R9-2009-0004

The Regional Board is currently reviewing written comments on Tentative Order No. R9-2009-0004 for the proposed Gregory Canyon Landfill that were received prior to the deadline of 5:00 p.m. on July 13, 2009.

All comments received and responses to the comments, when completed, will be posted at the Regional Board's Gregory Canyon Landfill [website](#). This comment and response report is a work-in-progress and all efforts will be made to update the report on a weekly basis.

This report is separated into two sections: Individual Comments (sorted alphabetically by the commenter last name) and Grouped Comments. To find a comment from a specific individual or organization within this report please follow these steps:

1. Open the report with Adobe Acrobat Reader
2. Type the name of the individual or organization into the "Find" box at the top of the Acrobat Reader screen and hit enter
3. Press enter again to find more comments that include the search name.

As stated in the Regional Board's Notice of Public Comment Period (see website link above), pursuant to Title 23, California Code of Regulations, Section 648.4, the Regional Board may refuse to admit comments into the record if the comments were received after the deadline. Late comments will not be accepted if there has been a showing of prejudice to any party. The Regional Board may accept comments into the record if the proponent can demonstrate why the comments could not be submitted by the deadline or that compliance with the deadline created an unreasonable hardship for the proponent.

Individual Comments

Commenter: John Adam -- Private Individual

Section:

Comment:

I strongly urge the Board not to adopt Tentative Order No. R9-2009-004 as the landfill will eventually leak and contaminate the San Luis Rey River, as well as many wells in the area.

Commenter: Brian Baharie -- Cahuilla Tribal Environmental Protection Office

Section:

Comment:

The Cahuilla Tribal Environmental Protection Office is deeply concerned about the negative environmental impacts of the proposed Gregory Canyon Landfill project in North San Diego

county and the precedent it would set for allowing deterioration of the environmental quality of air, land, and water in that region.

As I'm sure you are aware, the proposed landfill site is located next to the pristine San Luis Rey River, one of few "live" rivers in the Southern California Area. This watershed is an important source of both surface and groundwater for local communities and tribes. The site is also located in close proximity to several cultural sites that are of very important significance to local Native Americans, and are considered sacred lands.

The US Environmental Protection Agency has formally stated that "every landfill eventually leaks". Further research by EPA has shown that the chemicals produced by decomposing trash in landfills can cause severe health problems including cancer, asthma and birth defects. We are troubled by the siting of the proposed landfill so close to residential areas, tribal lands, and to the San Luis Rey River itself. Data shows that landfills are also known repositories for unknown amounts of toxic and biological wastes. Chemicals and biological agents will ultimately leak or leach out in liquid form, or be off gased. It would only be a matter of time before toxic chemicals from this landfill find their way into the surface and groundwater systems of the entire watershed, posing potentially severe human health risks to all residents of the region.

Instead of investing in a new, poorly sited landfill, we feel that agencies should prioritize further investment in waste diversion programs that will extend the life of currently permitted landfills. I urge you to reconsider the need for this landfill and respectfully ask that you deny permits for this ill conceived project.

Commenter: Andrew Bailey -- Private Individual

Section:

Comment:

This valuable and irreplaceable aquifer needs heightened protection. The proposed landfill poses an unacceptable level of risk even with stated mitigation measures: we know five and five are not enough protection in this region.

It seems like approval would go counter to the mission of the Regional Water Quality Control Board.

Please deny this dangerous project.

Commenter: Andrew Bailey -- Private Individual

Section:

Comment:

I thought we already said no to this!

This valuable and irreplaceable aquifer needs heightened protection. The proposed landfill poses an unacceptable level of risk even with stated mitigation measures: we know five and five are not enough

protection in this region.

It seems like approval would go counter to the mission of the Regional Water Quality Control Board.

Please deny this dangerous project

Commenter: Bobby Barrett -- Viejas Tribal Government

Section:

Comment:

Groundwater Impacts. The proposed Gregory Canyon Landfill would be located on a fractured bedrock aquifer and threatens existing and future water supplies. Municipalities, including the City of Oceanside, rely on the same water source that runs past and beneath the landfill site. When the landfill liner leaks, it will contaminate drinking water for all downstream users. There is no adequate protection provided in the waste discharge requirements from events such as fire ' or earthquakes. This water source is connected to Pala's sole water source and the lifeline of the San Luis Rey river. Endangering that source endangers human and natural resources throughout the Pala Basin.

Surface Water Impacts: Construction of the landfill would eliminate at least two blue-lined streams, causing the loss of a tributary to the San Luis Rey River, and place the San Luis Rey River at risk of impacts from landslides, leachate spills from trucks, contaminated storm runoff and leaking liners.

Fails Nearly All Siting Criteria, The proposed Gregory Canyon landfill site failed 7 out of the 8 landfill siting criteria when reviewed by the County of San Diego: It is located partly in a floodplain, it is 6 miles from the Lake Elsinore earthquake fault, it is an incompatible land use, there are at least 3 endangered species on the site, it is within 1,000 ft of an important archeological site, it overlies a significant groundwater basin which is the sole source of water to the Pala Indian Reservation and the San Luis Rey Municipal Water District, and two aqueducts are within 200 ft of the proposed landfill. There is a reason these siting criteria were developed—they should not be ignored by any agencies.

Commenter: Bobby Barrett -- Viejas Tribal Government

Section:

Comment:

The Viejas Band of Kumeyaay Indians is sending this letter to express our strong opposition to the issuance of a Waste Water Discharge permit for the Gregory Canyon Landfill by the Regional Water Quality Control Board (RWQCB). The landfill is proposed to be built on a Luiseño cultural mountain (Chokla) and threatens existing and future water supplies.

The Viejas Band remains very concerned that the agencies considering the discretionary actions on this project have utterly failed to consider the impact that the proposed project has on the religious and cultural beliefs of San Diego County Native Americans and on the long term viability of their homelands. If this project is allowed to move forward, without fully addressing cultural and environmental concerns, the neighboring Pala Band of Mission Indians

will be left with a shattered sacred site and water source that remains in jeopardy for generations to come long after the project proponents are gone.

Because this is an inappropriate site for a landfill, the proposed Gregory Canyon Landfill has not obtained any of its permits— fifteen years after it was designated as a landfill and recycling site. It is time to pull the plug on the proposed project once and for all for the following reasons:

- **Cultural and Sacred Sites** The landfill would be built on Chokla and adjacent to Medicine Rock, both sites that are sacred to Native Americans in Southern California. Chokla is one of the homes and resting places of Takwiic, an important spiritual figure to all Luiseno people. It has been scaled and visited by Luiseno people for centuries, but would now be hollowed out and filled with trash. Medicine Rock is also the site of ceremonies and religious gatherings for people. Building a landfill at Gregory Canyon would destroy and desecrate Chokla and Medicine Rock, forever destroying a place of spiritual significance.

Imported Water Endangerment. The landfill is near two major San Diego County Water Authority pipelines which provide imported water to the San Diego area. Gregory Canyon Ltd. is obligated to relocate these pipelines but has not agreed to do so and questioned its need to do so. -A rupture of one of these pipelines would cause significant, long term impacts to the San Luis Rey riparian system, as well as sever a water lifeline to the greater San Diego area.

The mission statement of RWQCB is developing and enforcing water quality objectives and implementing plans that will best protect the area's waters while recognizing our local differences in climate, topography, geology and hydrology.

It is imperative that the RWQCB use its discretionary authority to protect the cultural significance of Chokla and protect this water supply from any potential leakage from the proposed Gregory Canyon Landfill. If a leak occurred at Gregory Canyon it would endanger public drinking water for hundreds of thousands of San Diego County residents forever." The RWQCB has already indicated that there is no manner to effectively monitor impacts to the fractured bedrock aquifer beneath the proposed site! To approve this permit would go against your own mission statement and will forever ruin Chokla and Medicine Rock and endanger the basin's water supplies. For Tribes and their reservations and resources, the relevant time frame extends well beyond the life of a permit or a "closure plan" or a period of property ownership. The time frame extends over many generations, and once these valuable resources are gone, we can never get them back.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section:

Comment:

Gregory Canyon Ltd. is prepared to continue to work with the Regional Board to provide a complete and thorough detection monitoring program for groundwater and surface water to protect the surrounding water quality.

Gregory Canyon Ltd. is fully prepared to provide a replacement water contingency plan to provide water for downgradient receptors of basin water.

Gregory Canyon Ltd. has committed to obtain environmental liability insurance over and above the regulatory funding requirements.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Closure and Post-Closure Specifications G.2

Comment:

Revise to state: At closure, the Gregory Canyon Landfill shall receive a final cover, which is designed and constructed to function with minimum maintenance, and consists of, at a minimum, a 2-foot thick foundation layer (which may contain waste materials), a barrier layer consisting of a synthetic cover (i.e., a 60-mil LLDPE geomembrane); a HDPE drainage geocomposite layer (on the deck areas only); and a two-foot vegetative layer of random soils; or an engineered equivalent final cover approved by the Regional Board pursuant to CCR Title 27 §20800(b) and (c).

Rationale: The JTD currently specifies a LLDPE geomembrane, and not a clay liner, as the barrier layer in the final cover system. An engineered alternative may be proposed at a later date.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Closure and Post-Closure Specifications G.3

Comment:

Revise to state: At closure, the Gregory Canyon Landfill final cover shall be constructed to achieve a minimum 3 percent slope to prevent ponding and infiltration and allow for future settlement and 27 CCR Section 21090(6)(b)(1)(A).

Rationale: Three percent is the minimum slope required to maintain drainage. It would be impossible to maintain one uniform grade over the entire landfill footprint. Makes this provision consistent with the JTD.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Closure and Post-Closure Specifications G.6

Comment:

Revise to state: Vegetation used at the site shall be selected to utilize native vegetation species that require minimum irrigation and maintenance, and shall not impair the integrity of the landfill cover or containment structures, and meet the requirements of CCR Title 27, §21090(a)(3)(A)(1).

Rationale: Reflects EIR requirement that revegetation be done with native species, not just drought-tolerant species.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Detection Monitoring Specification C.5.e

Comment:

C.5.e., second sentence. Revise to state: Discharger shall monitor each well/MPar pair in one of two modes, as follows:

Rationale: Typographic error.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Detection Monitoring Program B.11, first sentence

Comment:

Revise to state: Once the WMU is in operation, the primary LCRS shall be monitored for liquid in the sump (with a properly calibrated electric probe for pH and electric conductivity to monitor for changes that indicate the liquid is leachate as opposed to rainwater or construction water) [weekly until leachate is indicated].

Rationale: It is recommended that a protocol be establish including weekly monitoring of the primary LCRS (along with the subdrain and secondary LCRS) so that the presence of liquid is identified at the earliest possible time.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Detection Monitoring Program B.12.a.ii

Comment:

B.12.a.ii., first sentence. Revise to state: Any anthropogenic (non-metallic) compound included in the list of COC detected in samples collected from a groundwater monitoring well, and verified by a retest, automatically becomes part of the MPar list for the facility.

Rationale: Several COC metals are likely to be detected during the COC sampling event, however, because they are also naturally occurring, they are not particularly indicative of a release as compared with non-metallic COCs. Therefore, it is recommended that the only the non-metallic COCs be automatically added to the list of MPars. Cyanide, sulfide and metals would be added to the MPars only if measured concentrations exceed background levels.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Detection Monitoring Program B.13

Comment:

B.13 Add new section B.13 as follows, then renumber current sections B.13 and B.14 to B.14 and B.15:

Soil Pore Gas

The Discharger shall install, expand as needed, and operate a landfill gas monitoring system in accordance with an approved landfill gas monitoring plan. The monitoring points shall be located along the perimeter of the landfill footprint within less than 1000 feet of each other. The monitoring points shall be monitored for methane, oxygen and carbon dioxide with a calibrated field instrument.

Rationale: Soil pore gas probe construction is included in the project and once the probes are constructed, it is proposed that they will be monitored quarterly in accordance with State regulations.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Detection Monitoring Program B.2

Comment:

Modify the list of monitoring parameters to Appendix I VOCs.

Rationale: Federal regulation 258.54(a) and (b) indicates that the detection monitoring program must include the Appendix I list of constituents. Considering that the landfill will be fully lined, until leachate analyses indicate the presence of other anthropogenic compounds, the Appendix I VOCs are very good indicators of release.

This program is consistent with detection monitoring programs within the State. Any additional VOCs detected during leachate testing would be added to the list of MPars.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Detection Monitoring Program B.6

Comment:

Delete.

Rationale: Light non-aqueous phase liquids are rare at landfills because of the lack of significant concentrations of fuel type hydrocarbons that would be required to produce a visible immiscible layer. Therefore, it is recommended that this item be removed. However, at a minimum, it is recommended that this item be revised to state that if dedicated equipment is installed in monitoring wells at the site that this requirement be waived, since it is not practical to remove the pump equipment to inspect for an immiscible layer.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Detection Monitoring Program B.9.b.ii

Comment:

Revise to state: If methane is detected in the secondary LCRS at a concentration equal to or greater than 5%, vapor samples will be collected in a SUMMA canister and analyzed for volatile constituents using USEPA Method TO-14 [quarterly].

Rationale: To better quantify a significant detection, 5% methane is recommended as a threshold for gas analysis. Also note that the project proposes to include perimeter landfill gas monitoring as the landfill is developed.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Detection Monitoring Program B.9.b.iii

Comment:

Revise to state: Pressure changes in the secondary LCRS will be monitored every 15 minutes for the first 3 hours that landfill gas is extracted from the primary LCRS.

Rationale: The Kiefer Landfill M&RP cited in the Technical Report includes monitoring every 15 minutes rather than the stated 3 minute frequency. The reduced frequency will provide 12 data points over the 3-hour monitoring period, which should be sufficient for assessment of pressure changes in the secondary LCRS.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Detection Monitoring Specification C.5.a.i

Comment:

C. 5.a.i., fourth sentence. Revise to state: At the discretion of the statistical analyst, the Discharger shall retire the well/MPar's oldest two years of background data (after 16 background data points have been collected), thereby producing a data set covering the then-previous four years (16 data points).

Rationale: In some cases a four-year data base is insufficient to represent changes in the water chemistry associated with the rainfall record. In the case of a significant drought condition after one or more above-average rainfall years, higher concentrations may be observed that would suggest a statistical indication of release, but when compared with similar data during earlier similar climatic conditions prior to and outside of the four-year data period would suggest normal background conditions.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Detection Monitoring Specifications C.5.a.i

Comment:

C. 5.a.i., first sentence. Revise to state: Pre-Detection Background Data Set – Initially, except as otherwise provided in Detection Monitoring Specification C.5.a.i(3)(a) and (b) or C.7, for each given MPar at a given downgradient monitoring well (well/Mpar pair), the proposed background data set shall consist of all validated data from that compliance well and parameter, for the period of four years after adoption of this Monitoring and Reporting Program, unless 16 data points have already been obtained at a monitoring well.

Rationale: Most of the wells included in the monitoring program already have been sampled a minimum of 16 times for COCs. Therefore additional quarterly COC sampling in these wells would not be warranted.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Detection Monitoring Specifications C.5.a.i

Comment:

C. 5.a.i., third sentence. Revise to as state: Then, every two years as part of the annual monitoring summary report [see CCR Title 27 §20415(e)(14)], the Discharger shall add data to the background data set for each well/MPar pair after validating (via a method approved by the Regional Board), that the new data does not contain results indicating a landfill-related increase over the existing background data concentrations.

Rationale: In some cases an increasing trend may be observed, but be unrelated to the landfill (e.g., impacts from upstream activities, or climatic changes associated with a long-term drought condition).

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Detection Monitoring Specifications C.5.f

Comment:

C.5.f. Note the statistical program Santitas® is currently proposed for the monitoring program.

Rationale: This program meets the statistical requirements specified and is recognized as appropriate for use at the Gregory Canyon Landfill.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Discharge Specifications C.5.c, first sentence

Comment:

Revise to state: If recycled water is proposed to be distributed other than directly by water trucks for construction activities, prior to providing recycled water to a new use site, the Discharger shall arrange for a complete cross-connection shut down test performed by a certified cross-connection specialist of the San Diego County Department of Environmental

Health (DEH) in the presence of an adequately trained and qualified designated use site supervisor.

Rationale: There are no plans to construct an irrigation system or hard plumbed recycled water system where a cross-connection test would be necessary. The EIR identifies direct delivery of the recycled water by truck to designated drop tanks, and distribution by specifically designated site recycled water trucks. These will be appropriately monitored in accordance with the San Diego County Recycled water guidelines under the direction of a Site Supervisor trained in safe use of recycled water.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Discharge Specifications C.5.m

Comment:

Irrigation with recycled water shall be during periods of minimal public use of the service area. Consideration shall be given to allow an adequate dryout time before the irrigated area will be used by the public.

Rationale: Use of recycled water would be required during operating hours, in order to meet dust control requirements on unpaved landfill roads, when landfill employees or waste truck drivers are present. However, these persons are trained professionals and adequate protections will be in place.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Fill Specifications F.5

Comment:

F.5, fifth, sixth, and seventh sentences.

Revise to state: The legal limitation must prohibit, without exception, all residential, commercial, industrial, institutional, and transportation development, and any other infrastructure development unless measures are taken to avoid any adverse impact to wetland and streambed functions and values of the mitigation areas and their buffers. The preservation mechanism must clearly prohibit activities that would result in soil disturbance or vegetation removal, other than the removal of non-native vegetation, unless such measures are taken. Other infrastructure development to be prohibited (unless such measure are taken) includes, but is not limited to, additional utility lines, maintenance roads, and areas of maintained landscaping for recreation.

Rationale: Existing utility and transportation easements on the property must be reflected in the conservation easement. Development on those easements or other development on the property would be acceptable if adequate mitigation or compensation measures are implemented, and this provides flexibility as the project evolves over time. One example of this is the SDG&E gas line easement and construction through the habitat preservation area, which has been adequately mitigated through off-site acquisition and preservation of habitat.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Finding 10.a

Comment:

10.a. Add new subsection (xiv) to state: (xiv). 12-inch thick subdrain gravel

Rationale: Makes this finding consistent with JTD.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Finding 10.e

Comment:

10.e., third sentence. Revise to state: Groundwater collected in the subdrain would be discharged to a 10,000 gallon above ground storage tank.

Rationale: The tank receiving uncontaminated water from the subdrain would go to a separate tank, not one of LCRS storage tanks. Contaminated subdrain water would be directed to the LCRS storage tank(s).

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Finding 11

Comment:

Revise to state: The operations layer for the Gregory Canyon Landfill will consist of a maximum two-foot thick sand or soil layer. The operations layer is placed over the liner system to provide protection of the double composite liner system against any damage i.e., by puncture, from the disposal of municipal solid waste and a non-woven geotextile is placed between the operations layer and the LCRS gravel layer which also provides long-term protection for the LCRS against clogging (due to the accumulation of soil from the operations layer).

Rationale: Adds the design detail of the non-woven geotextile, for the purpose of preventing clogging of the LCRS from soil comprising the operations layer.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Finding 12, last paragraph

Comment:

Revise to state: Construction and operation of the borrow/stockpile areas, including the drainage facilities, will be conducted in accordance with the Best Management Practices (BMPs) developed as part of the Storm Water Pollution Prevention Plan (SWPPP). Excavation

of the borrow/stockpile areas will be a maximum of 150 feet deep and positive drainage will be maintained.

Rationale: Makes the finding consistent with the JTD, and offers greater flexibility to operate the borrow/stockpiles in response to actual field conditions.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Finding 12.a.

Comment:

Revise to state: Borrow/Stockpile Area A is approximately 22 acres and will be located west of the WMU footprint.

Rationale: See comment to Finding 12, which incorporates the discussion of depth for all borrow/stockpile areas from the JTD.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Finding 13, fourth sentence

Comment:

Revise to state: Geosynthetic blankets or processed green waste will be used initially in conjunction with soil.

Rationale: Makes this Finding consistent with section D.10.b.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Finding 14, after 4th sentence

Comment:

Add new sentence to state: The capacity of the treatment system will be increased as needed in the event of a release.

Rationale: Reflects language in the JTD and EIR indicating that the capacity of the treatment plant could increase if needed, and responds to comments made at the Workshop.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Finding 16.c., third sentence

Comment:

Revise to state: Both of the desilting basins (east and west basins) will discharge to alluvial areas on the site for percolation.

Rationale: As discussed in the SWPPP, discharges from the desilting basins would be to the alluvial floodplain for percolation, in order to prevent any hydromodification to the San Luis Rey River.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Finding 19, first sentence

Comment:

Revise to state: Development by the Discharger of a contingency plan to provide replacement water to all private and public well owners, and other parties reasonably anticipated to be affected by the release of wastes or waste constituents from the WMU is appropriate because:

Rationale: The technical memorandum prepared by Prof. David Huntley concluded “It is very likely that, if any release occurs to the fracture rock system, contaminants would be rapidly diluted to below the detection limit in the adjacent alluvial system. I am unaware of any alluvial aquifer which has been contaminated by releases to an adjacent fractured rock aquifer.” Given those conclusions by a leading independent expert, it is not reasonable nor provides any benefit to require a replacement water contingency plan for wells located miles downgradient from the landfill that have no likelihood of being contaminated from landfill operations.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Finding 22, first and second sentences

Comment:

Add “Department of Environmental Health” after “County of San Diego.”

Rationale: DEH, not the County, is the CEQA lead agency for the landfill project.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Finding 25.e, first and second sentences

Comment:

Substitute “drainage” for ephemeral stream.

Rationale: This descriptive term is more accurate, since this feature does not include an ordinary high water mark indicative of flows occurring on a routine basis.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Finding 25.f. and g.

Comment:

Revise to state:

f. Gregory Canyon, Ltd. submitted an Application/Report of Waste Discharge on September 29, 2005 for discharge of waste (a landfill and associated infrastructure) to surface waters of the state. The project will result in the discharge of waste into 1.325-acre surface waters of the state as follows:

Surface waters of the State – Impacts (Acre)	Permanent and Temporary
Vegetated surface waters (Southern willow scrub)	0.400
Vegetated surface waters (disturbed Southern willow scrub)	0.400
Vegetated surface waters (Cottonwood-willow riparian forest)	0.200
Open channel	0.200
Ephemeral drainage (Gregory Canyon stream)	0.125
Total Impacts to surface waters of the State	1.325

g. The mitigation for proposed project impacts will consist of restoration and enhancement of 4.0 acres of surface waters of the U.S. and the state, consisting of 3.2-acres of Southern willow scrub and 0.8-acre of cottonwood-willow riparian forest in the nearby San Luis Rey River floodplain (Pala hydrologic subarea 903.21). The overall mitigation ratio will be 3.02:1 (mitigation to impacts). Mitigation for impacts to coast live oak within the ephemeral drainage will be required at a ratio of 3:1 through the permits to be issued by DEH and the California Department of Fish & Game.

Rationale: Revises the impact acreage to southern willow scrub to be consistent with the EIR and Biological Assessment. In fact, the reference to 0.03 acres of SWS impact appears to be a typographical error, since the overall mitigation ratio included in the tentative WDR's of 3.02:1 is accurate if this impact is 0.4 acres (4 acres of mitigation to 1.325 acres of impact is a 3.02:1 ratio). Adds a discussion about mitigation for impacts to coast live oak, which technically does not need to be in the WDR's, but it was raised in the BIA comment letter and some explanation may be helpful.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Finding 26

Comment:

Revise to state: The proposed project proposes to make use of recycled water consistent with the goals of Water Code, Division 7, Chapter 7, Water Recycling Law, and with the standards, policies, and regulations established in the Basin Plan for the achievement of water quality objectives.

Rationale: Recycled water would be used as needed as one source of supply, but its use is not required.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Finding 29.a, first sentence

Comment:

Add "and April 29, 2009."

Rationale: Adds a reference to the recent Workshop.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Finding 29.b, first sentence

Comment:

Delete "October 12" and substitute actual date of Board hearing.

Rationale: Makes findings accurate.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: General Discharge Specifications B.3

Comment:

Revise to state: The discharge of wastes shall be confined to the designated disposal area, underlain by the liner system prescribed by Landfill Construction Specification E.6 of this Order (except as required for construction of the liner system).

Rationale: Same as comment to section A.4, parenthetical clarifies scope of authorization from WDR's.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Landfill Construction Specifications 3.4.c

Comment:

E.4.c., third sentence. Revise to state: All temporary slopes must comply with this specification throughout the range of reasonably anticipated weather and hydrological conditions during the existence of the temporary slope.

Rationale: It is not possible to predict or prepare for extreme and highly unusual conditions.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Landfill Construction Specifications E.10.a

Comment:

E.10.a., first sentence. Revise to state: Units with intermediate cover (as defined in CCR Title 27 §20700), which have been/will be exposed for longer than two years from the time the intermediate cover was installed, shall have a minimum of two-feet of soil cover (including the intermediate cover) maintained over the landfill unit.

Rationale: Clarifies that the two-foot requirement can be met in part with the previously placed one-foot intermediate cover.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Landfill Construction Specifications E.2

Comment:

Revise to state: The bottom liner system of the WMU will consist of a one-foot thick gravel blanket and gravel filled trenches with slotted collector pipes in the floor areas. The gravel shall be designed to prevent clogging over the service life of the subdrain system and protect the integrity of the liner system during the operating life, closure and post-closure maintenance period of the WMU. The Discharger shall collect and test subdrain effluents for waste constituents and manage the effluent in compliance with all applicable federal, state and local requirements.

Rationale: This description is consistent with both the JTD and Finding 10.e.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Landfill Construction Specifications E.5.b

Comment:

Delete.

Rationale: This type of condition is only appropriate when a geomembrane or GCL is placed immediately above the foundation layer, not the compacted clay liner proposed for Gregory Canyon. In addition, a 12-ounce geotextile will be placed between the subdrain and the compacted clay liner. This condition would not provide any benefit or add to the integrity of the compacted clay liner.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Landfill Construction Specifications E.7

Comment:

Add sentence at end of subsection: Changes in the detailed ELLS testing methodology may be made with approval.

Rationale: This would provide flexibility to fine tune the ELLS testing methodology based on field conditions and to adjust to data as it is received.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Landfill Construction Specifications E.9.a.(2)

Comment:

Revise to state: Be comprised of gravel, sands, clays and/or silts.

Rationale: Of the soil types mentioned, only gravel and sands could meet the 0.01 cm/s permeability requirement. These types of loose materials are poorly suited for the primary purpose of the operations layer, which is to protect the liner from heavy equipment and placed waste. Also, this type of loose soil would be very difficult to maintain on side slopes. Finally, clogging of the LCRS is prevented by the use of a non-woven geotextile fabric between the operations layer and the LCRS. See comment on Finding 11.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Landfill Operation Specifications D.7.a

Comment:

Revised to state: The Discharger must implement and maintain the Construction BMPs as proposed in the Storm Water Pollution Prevention Plan for Gregory Canyon Landfill (GCLF), as amended.

Rationale: Corrects typographical error, also reflects that BMP's may change over time upon periodic review of the SWPPP.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Landfill Operation Specifications D.3

Comment:

D.3. Revise to state: Water used for facility maintenance shall be limited to the minimum volume necessary to meet applicable requirements of regulations adopted by, or any permit issued by, the San Diego County Air Pollution Control District.

Rationale: The requirements likely to be imposed by APCD are more stringent than simply avoiding immediate dust hazards, and may require more than very minimal use of water. However, the landfill plans to utilize non-toxic soil cement for many if not most dust control applications, which provides a higher level of control with much less water usage.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Landfill Operation Specifications D.6.b

Comment:

Revise to state: Non-contact surface water runoff within the boundary of the WMU which have been disturbed (i.e., precipitation that falls on disturbed areas within the WMU) shall be collected by the storm water conveyance system and discharged to the desiltation basins.

Rationale: Storm runoff from areas within the WMU would be directed to the perimeter drains prior to development of that portion of the landfill footprint. Storm runoff from all disturbed areas would be conveyed to the desiltation basins.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Landfill Operation Specifications D.7.b

Comment:

Add phrase “,or approved addenda” at end of sentence.

Rationale: Reflects that BMP’s may change over time upon periodic review of the SWPPP.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Landfill Operation Specifications D.8.c

Comment:

Replace “six” with “24.”

Rationale: Makes this section consistent with section D.8.b.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Monitoring Provision A.6, first sentence

Comment:

Revise to state: The Discharger shall retain paper and/or electronic (portable document format [pdf]) copies of records

Rationale: The use of records in electronic format provides an alternate way of easily storing, maintaining and distributing monitoring program records.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Monitoring Provision A.7.h

Comment:

Move to the end of section A.6.c. as A.6.d.

Rationale: Though this information is important to be collected and maintained, it is more appropriately included as a record with section A.6 exceptions (to be kept more than 5 years), rather than section A.7.h, which is primarily related to groundwater sampling records.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Prohibition A.4

Comment:

Revise to state: The discharge of waste to areas of the Gregory Canyon Landfill without a prescriptive liner or engineered alternative liner, except as authorized by WDRs (e.g., as provided in Finding Nos. 25.b, 25.f, and 25.g) or the terms described in Water Code §13264, is prohibited.

Rationale: The clarifying parenthetical reflects that the WDR's also authorize placement of soil in the Gregory Canyon drainage for purposes of constructing the liner, which would technically be pollutants placed in an area without a liner.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Provision H.12

Comment:

Revise to state:

REPLACEMENT WATER FOR WATER SUPPLY WELLS. In the event of a release of waste constituents and/or waste degradation products from the WMU that affects beneficial uses of groundwater, the Discharger shall provide either wellhead treatment or replacement water to all affected private and public well owners, and to all affected parties. The treated water or replacement water provided shall meet all applicable federal, State, and local drinking water standards, and shall have comparable quality to that pumped by the public water system or private well owner prior to the discharge of waste. The Discharger shall provide the Regional Board with a Water Replacement Contingency Plan for public and private well owners reasonably anticipated to be affected by releases from the WMU within 6 months of completing construction of the waste containment features for Phase 1 of the WMU.

Within 30-days of determining that there has been a release of waste constituents or waste degradation products from the WMU, the Discharger shall amend the Water Replacement Contingency Plan to include:

- a. An updated list of local private and public well owners reasonably anticipated to be affected by the release.
- b. A Public Participation Plan, including the following elements:
 - (1) Methods to identify interested parties (including private parties, public agencies, and environmental groups), and to maintain an interested parties list to facilitate public participation.
 - (2) Proposed methods and procedures to ensure adequate public notification of the release.

(3) Proposed plans to inform and involve the public during the investigation of the nature and extent of the release and implementation of corrective actions.

(4) Schedule for reporting implementation of public notification and public participation tasks to the Regional Board and updating the operating record for the facility.

c. Proposed methods and schedules for:

(1) Testing private and public water supply wells reasonably anticipated to be affected by the release for waste constituents detected in the release.

(2) Identification of preferred methods to provide replacement water, including evaluation of importation of potable water, installation and maintenance of wellhead treatment systems, and other methods to provide affected parties with replacement potable water supplies for

private and public water supply wells reasonably anticipated to be affected by the release.

(3) Reporting implementation of water replacement contingency actions to the Regional Board and updating the operating record for the facility.

Rationale: See comment on Finding 19 regarding limiting scope of contingency plan. Clarifies that wellhead treatment is an acceptable method for providing replacement water. Also, shortens time frames for preparation of contingency plan and reporting, which was an issue raised by a number of commenters at the Workshop.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Provision H.17.m

Comment:

Revise to state: All surface waters of the U.S. that are to be preserved shall be fenced no less than 10 days prior to the start of any project activities as needed to protect the southwestern arroyo toad. A qualified biologist shall show all preservation areas to all appropriate construction personnel and shall explain the conditions of this Order and other permits regarding impacts.

Rationale: Makes consistent with EIR and HRMP. Also, arroyo toad is the only non-avian threatened or endangered species on the landfill property. Also, see comment on section H.17.o.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Provision H.17.o

Comment:

Revise to state: The Discharger shall notify the Regional Board in writing at least 15 days prior to actual start dates for each project component taking place in waters of the U.S. (e.g., bridge construction, installation of mitigation, etc.).

Rationale: This clarifying comments reflects that section H.17 deals with the 401 certification, which is limited to waters of the U.S. and does not include the Gregory Canyon drainage. Impacts and mitigations to waters of the State are addressed in section H.18.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Provision H.18.c

Comment:

Revise to state: The proposed mitigation must commence before, simultaneously with, or within the season of, impacts to waters of the State, as needed to compensate for the grading impacts, and implemented in accordance with the Restoration and Enhancement Plan.

Rationale: This reflects EIR and HRMP provisions that habitat creation and restoration would occur on a phased basis as development of the landfill proceeds. It is not required that all creation and restoration activities commence before any disturbance. Also, there may be seasonal constraints to certain activities, such as clearing of vegetation at the bridge crossing relative to creation of wetland habitat at the bridge crossing. Also, see comment to section H.18.d regarding the need for grow and kill cycles. The initial grow and kill cycles would take more than 9 months before planting could begin, and creation and restoration would be not be considered complete until success criteria are met which could take up to 5 years.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Provision H.18.d

Comment:

Add comma between “mitigation” and “installation.”

Rationale: Based on the HRMP, habitat restoration occurs in three phases; removal of existing non-native vegetation and seed bank through several grow and kill cycles, planting, and completion upon meeting the success criteria. Reporting to RWQCB would occur with respect to each phase.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Provision H.18.g and h

Comment:

Delete.

Rationale: Duplicates sections F.5 and F.6.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Provision H.4, second paragraph and table

Comment:

Revise to state:

Initially, the Discharger shall establish financial assurances in the minimum amount of \$63,728,492. The financial assurances shall cover the costs estimated for closure, postclosure maintenance, and corrective actions for reasonably foreseeable releases from the waste management units at the Gregory Canyon Landfill:

TASK Estimate	Estimated Cost	Source of
Closure Volume 1, Page F.1-3	\$22,489,489	JTD (2008)
Post-Closure Maintenance and Monitoring Volume 1, Page F.1-9	\$36,405,687	JTD (2008),
Corrective Actions for reasonably foreseeable releases Volume 1, Page B.5-22 Total = \$63,728,492	\$4,833,316	JTD (2004),

Rationale: Reflects 2008 update to closure and post-closure maintenance cost estimates.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Provision H.6

Comment:

Add a new paragraph at end of section: Notwithstanding the above, the Discharger may make modifications to the design and operation of the WMU not meeting the criteria set forth in sections I.1 and I.14 as long as it is demonstrated that the changes will provide equal or greater protection of water quality and are approved, without formal revision to this Order.

Rationale: This would provide the flexibility to make non-material changes without having to revise the entire WDR's, with approval of RWQCB staff, and this type of condition is included in most WDR's issued in California.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Reporting Requirement I.15.a

Comment:

Delete.

Rationale: Duplicates section F.7.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Reporting Requirement I.18

Comment:

This item is mis-numbered as 8 and should be re-numbered 18.

Rationale: Typographic error.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Reporting Requirement I.18.d

Comment:

I.18.d, second paragraph, third sentence. Revise to state: Registration numbers of the responsible lead professionals shall be included in all plans and reports submitted by the Discharger.

Rationale: Use of professionals registered and certified within the State of California satisfies the qualifications required under State and federal regulations. It is not customary to submit a statement of qualifications with each technical submittal, as long as the lead professionals are properly registered.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Reports to be Submitted H.14

Comment:

Note: The RWQCB is referred to the attached workplan proposed to expand and improve the coverage of the existing groundwater monitoring network and evaluate wellhead protection areas in the vicinity of the project site.

J. , Table, right column. Revise to state: Reference

Rationale: Typographic error.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Reports to be Submitted H.2.e

Comment:

Revise to state: Monitoring well information, method and time of groundwater level measurement, and a description of the method of purging used before sampling;

Rationale: The original language implies a post-sample purge, though post-sample purging is no longer required by State or federal regulations.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Reports to be Submitted H.3.a, sixth sentence

Comment:

Revise to state: The report shall include analysis of trends that have been identified over the last monitoring year, and analysis of any newly identified trends, significant changes in a known trend, or trend reversals identified in the data collected for groundwater, surface water (including seeps and springs), and vadose zone monitoring points (subdrains, the LCRSs, or landfill gas wells);

Rationale: Currently other vadose zone monitoring points are proposed rather than lysimeters as part of the monitoring system.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Reports to be Submitted H.3.g

Comment:

Revise to state: A copy of the Storm Water Pollution Prevention Plan, as amended. This document may be submitted under a separate cover; and

Rationale: Frequently the storm water program is conducted by a separate consultant. Modification of this text provides some flexibility in managing separate consultants and meeting deliverable deadlines.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Reports to be Submitted H.5, first sentence

Comment:

Revise to state: Once leachate is detected within the primary LCRS, the Discharger shall submit the leachate monitoring results each January 31, taken from the previous October, including an identification of all detected Appendix II constituents and MTBE that are not on the most current version of the COC list for the WMU.

Rationale: The additional text clarifies timing of the first leachate report, to occur after leachate is measured in the LCRS sump.

Commenter: Sarah Battelle -- Gregory Canyon Ltd.

Section: Response to Leachate Seep, first sentence

Comment:

Revise to state: The Discharger shall report by telephone and facsimile within three days, the discovery of any previously unreported seepage of liquid from the WMU.

Rationale: It is recommended that the language be simplified to indicate any unreported liquid seep will be reported.

Commenter: Olivia Benavidez -- Private Individual

Section:

Comment:

The Gregory Canyon is adjacent to the San Luis River in San Diego County. This habitat is home to many endangered species- for example, the Golden Eagle. Also, the area around the canyon is critical drinking water sources.

However, a developer thinks we should create a 183 acre landfill IN THE CANYON. This would destroy the canyon and the areas around it. It would threaten more than 1,700 acres.

Our environment is facing so many struggles- the gyre, global warming, and animal extinction. We don't need this too- a 183 acre landfill in a exotic habitat that is home to many.

Commenter: Bill Bodry -- Private Individual

Section:

Comment:

With all the desert area in this part of the world, why risk a place of such natural and historic beauty and important water resource?

Commenter: Kathryn Bojorquez -- Private Individual

Section:

Comment:

I AM IN DEFINITE OPPOSITION TO THIS PROPOSED LANDFILL. PLEASE DO NOT DESTROY THIS AREA, INTOXICATING IT. SAVE SACRED NATIVE AMERICAN GROUNDS. JUST STOP....DON'T DO IT.. NO NO NO NO

Commenter: Steven Calender -- Private Individual

Section:

Comment:

As a citizen of San Diego County, I urge you to respect the rights of the Pala Indians and protect a beautiful place in the county. Stop the landfill!

Commenter: Maria Cardenas -- Private Individual

Section:**Comment:**

Human beings are no longer in a position to use and abuse land at whim. Development has encoached upon the existence and well being of our wildlife and their habitats - never mind the simple beauty and gifts of nature that are here for us all to enjoy. This is a ridiculous and absurd "solution" and I categorically reject it.

Commenter: Marjorie Caserio -- UC San Diego, Dept. Chemistry & Biochemistry

Section:**Comment:**

I wish to express my opposition to the proposed Gregory Canyon Landfill. I am very familiar with the site as we have a home in Pauma Valley. Every few years the San Luis River becomes a raging torrent. This shows the damage that water can do when major storms hit. I have photographs to prove it. The proposed landfill is too close to the San Luis River water shed and poses a serious and widespread pollution o the watershed, worsened by storms.

Apart from the watershed pollution potential, the ruinous effect of endless dump trucks along one of the most scenic rural routes in North San Diego County will be irreparable. Witness the traffic problems that have burgeoned with the opening of casinos along route 76. These problems will be magnified many times by the landfill traffic.

Commenter: Glenn Casey -- Sierra Club, San Diego Chapter

Section:**Comment:**

I urge the Board not to adopt/pass the motion to open the Gregory Canyon Landfill because it will eventually leak contaminating and ruining the precious natural water resources in the San Luis Rey River and many wells in the area. It makes no sense to sacrifice these natural water resources for the landfill.

Please do not allow this.

Commenter: Eric Cathcart -- Private Individual

Section:

Comment:

I am very concerned about the proposed Gregory Canyon Landfill. Specifically, the proposed location appears to be adjacent to the San Diego Aqueduct and the San Luis Rey River. This places the landfill near (if not over) a valuable and irreplaceable aquifer. The aqueduct supplies the City of San Diego, the aquifer supplies irrigation and domestic water wells and the San Luis Rey River provides water for the City of Oceanside's water recycling plant.

I have reviewed available information provided by Gregory Canyon, LTD (on their website) and Gregory Canyon Related Environmental Impact Reports published on the County of San Diego's web site. Despite project proponent assertions, it is very likely, due to geographic and geologic conditions in the area that the landfill will eventually leak, resulting in contamination of valuable water resources. It has been my experience that no matter what mitigation measures are in place, all landfills eventually leak. Stated mitigation measures and the location of this project are totally unacceptable.

The mission of the Regional Water Quality Control Board is to preserve and enhance the quality of California's water resources. You are, in essence, the "Guardians of Water Quality" for the State of California. Adoption of the Tentative Order for the proposed Gregory Canyon Landfill contradicts this mission and puts valuable water resources at risk. Please deny this project.

Commenter: Carolyn Chase -- Private Individual

Section:

Comment:

The geologic conditions at the site increase the risk of leaks that contaminate groundwater basins in the watershed of the San Luis Rey River. The landfill would also emit a greenhouse gas, methane, because it will not fall under new regulations that limit the organic matter that produces this gas.

Thanks for your consideration and please do the right thing and use your authority to protect our limited water resources.

Commenter: Ember Christensen -- State Water Resources Control Board

Section: Finding 10

Comment:

First sentence: Consider exchanging the word "maximum" for "minimum: to agree with criteria in Finding 10.

Commenter: Ember Christensen -- State Water Resources Control Board

Section: Finding 23

Comment:

A citation is made to CCR Title 27 §22112(a). It appears that there is no such section in CCR Title 27. Perhaps the author wished to cite CCR Title 27 §22212(a)?

Commenter: Ember Christensen -- State Water Resources Control Board

Section: Finding 23

Comment:

A citation is made to CCR Title 27 §22112(a). It appears that there is no such section in CCR Title 27. Perhaps the author wished to cite CCR Title 27 §22212(a)?

Commenter: Ember Christensen -- State Water Resources Control Board

Section: Finding 25.I

Comment:

Finding 25. I. : This first sentence has an awkward construction. What does it mean that adoption of this order “acts as Clean Water Act §401” ? Perhaps you mean adoption of this order makes application of the requirements in the listed regulations?

Commenter: Ember Christensen -- State Water Resources Control Board

Section: Finding 25.I

Comment:

This first sentence has an awkward construction. What does it mean that adoption of this order “acts as Clean Water Act §401” ? Perhaps you mean adoption of this order makes application of the requirements in the listed regulations?

Commenter: Ember Christensen -- State Water Resources Control Board

Section: Finding11

Comment:

Finding 11: First sentence: Consider exchanging the word “maximum” for “minimum” to agree with criteria in Finding 10.

Commenter: Ember Christensen -- State Water Resources Control Board

Section: Provision H.4(a)

Comment:

Section 20950(f) of the CCR Title 27 states “For landfills required by the CIWMB to have financial assurance mechanisms under Chapter 6, the RWQCB shall assist the CIWMB: (1) by verifying the amount of coverage proposed by the discharger to meet applicable SWRCB-promulgated requirements of this subdivision; and (2) by participating in the CIWMB’s periodic review of the adequacy of financial assurance mechanisms, and in any enforcement action that such review reveals, as necessary.” Furthermore, other sections state “For solid waste disposal sites, the RWQCB shall coordinate with the CIWMB pursuant to §20950(f).” (CCR Title 27 §22207(a), §222112(a), §22222). It appears that Gregory Canyon Landfill is a municipal solid waste landfill and “required to be permitted as [a] solid waste landfills pursuant to Chapter 4 [§21450 and §21563] of this Division and ha[s] been or will be operated on or after January 1, 1988.” (CCR Title 27 §22205, §22210, §22220) and therefore required to “demonstrate financial responsibility to the CIWMB.” (CCR Title 27 §22206, §22211, §22221) Furthermore, according to the Solid Waste Information System (SWIS), it appears that Gregory Canyon Landfill has financial assurance responsibilities to the CIWMB. SWIS Database: <http://www.ciwmb.ca.gov/SWIS/37-AA-0032/Detail/>

Commenter: Ember Christensen -- State Water Resources Control Board

Section: Provision H.4.a

Comment:

Section 20950(f) of the CCR Title 27 states “For landfills required by the CIWMB to have financial assurance mechanisms under Chapter 6, the RWQCB shall assist the CIWMB: (1) by verifying the amount of coverage proposed by the discharger to meet applicable SWRCB-promulgated requirements of this subdivision; and (2) by participating in the CIWMB’s periodic review of the adequacy of financial assurance mechanisms, and in any enforcement action that such review reveals, as necessary.” Furthermore, other sections state “For solid waste disposal sites, the RWQCB shall coordinate with the CIWMB pursuant to §20950(f).” (CCR Title 27 §22207(a), §222112(a), §22222).

It appears that Gregory Canyon Landfill is a municipal solid waste landfill and “required to be permitted as [a] solid waste landfills pursuant to Chapter 4 [§21450 and §21563] of this Division and ha[s] been or will be operated on or after January 1, 1988.” (CCR Title 27 §22205, §22210, §22220) and therefore required to “demonstrate financial responsibility to the CIWMB.” (CCR Title 27 §22206, §22211, §22221) Furthermore, according to the Solid Waste Information System (SWIS), it appears that Gregory Canyon Landfill has financial assurance responsibilities to the CIWMB. SWIS Database: <http://www.ciwmb.ca.gov/SWIS/37-AA-0032/Detail/>

Commenter: Ember Christensen -- State Water Resources Control Board

Section: Provision H.4.b

Comment:

It appears that "The operator must annually adjust the estimate for inflation" (CCR Title 27 §22221 (a)(2)) and financial assurances are to be updated yearly, "by the anniversary date of the establishment of the fund" (CCR Title 27 §22225 (a)(1)).

Commenter: Ember Christensen -- State Water Resources Control Board

Section: Provision H.4.b

Comment:

It appears that "The operator must annually adjust the estimate for inflation" (CCR Title 27 §22221 (a)(2)) and financial assurances are to be updated yearly, "by the anniversary date of the establishment of the fund" (CCR Title 27 §22225 (a)(1)).

Commenter: Kathy Christy -- Private Individual

Section:

Comment:

As a former Commissioner on the Des Moines County Solid Waste Commission, I oppose the Gregory Canyon Landfill. Our commission studied liners for a new landfill. I don't believe a leak-proof lining system can be guaranteed.

The siting of the Gregory Canyon Landfill near the San Luis Rey River could compromise the future usage of this water due to leakage from the landfill. This river is an important water source for the city of Oceanside. Due to the critical shortage of water for our region that is forecast for the future, we cannot take the chance of losing this water supply.

A different site must be located for this landfill.

Commenter: Phil Church -- Private Individual

Section:

Comment:

In light of the recent sequence of events related to the Water Supply for the proposed Gregory Landfill Project, it is my opinion that (according to CEQA), the EIR that was certified by the County of San Diego is no longer adequate.

This point was made by your agency recently, and I have seen no follow up to your proposed course of action with the County regarding this matter.

It is my Professional Opinion (see Riverwatch v. County of San Diego), as it pertained to the Rosemary Mountain Quarry Project, that the applicant for the Gregory Canyon Landfill claimed to have adequate water on site to qualify the EIR. The point in Rosemary was that the

additional impact of the Truck emissions was not included in the Particulate numbers for the EIR.

It is, further, my opinion that the Transportation of ANY water, by anything other than a Pipe, will contribute to Particulate Emissions both by Tailpipe Emissions and by Tire Shedding, Aero-turbulence, and other means that will impact both Air and Water Quality in the sphere of influence under review.

As these (previously undisclosed), impacts were not included in the EIR submitted to the County, CEQA requires the EIR to be De-Certified. Additionally, it is a point of consideration by your board to acknowledge the additional (cumulative), negative impacts as NOT having been addressed through that venue, regardless of the County's reluctance to rescind the EIR certification.

Commenter: Audrie & Steven Clark -- Private Individual

Section:

Comment:

I am opposed to Tentative Order R9-2009-004

The Gregory Canyon landfill will eventually leak contaminating and ruining the precious natural water sources in the San Luis Rey River and the many wells in the area.

In this drought should we be doing anything that will reduce the clean water we and all the animals depend on? Please do not adopt the Waste Discharge Permit for this landfill.

Commenter: Marjory Clyne -- Private Individual

Section:

Comment:

I am opposed to the development of the Gregory Canyon Landfill. Please do not adopt the Water Discharge Permit for this landfill.

In my view, the proposed Gregory Canyon Landfill poses unacceptable risks to irreplaceable precious natural water resources and habitats in San Diego County.

Commenter: William A. and Janet M. Corkran -- Private Individual

Section:

Comment:

With this many negatives obvious, exactly what makes the Regional Board even entertain something that will, without doubt, subject Gregory Canyon to degradation that can never be reversed.

Commenter: George Courser -- Backcountry Coalition

Section:

Comment:

Your board, allowing Gregory Canyon as an agenda item, has undertaken an assignment of monumental proportion and importance. This project's potential impacts can only be classified with the most onerous ever reviewed by a California regulatory body. Diablo Canyon and San Onofre nuclear reactors stand-alone with Gregory Canyon in their potential to destroy surface and groundwater drinking supplies, contaminate square miles of pristine environments, as well as sicken thousands of California residents...in perpetuity.

Please be reminded that your Regional Board has every reason to confront this project with manifest trepidation and the utmost caution. The Board's engineering and geology staff is currently overseeing remediation of the Las Pulgas landfill on Camp Pendleton. This landfill, and its failed liner discharging leachate to groundwater, should prove instructive to staff and board members. Under direction from the Regional Board, Camp Pendleton was storing 300,000+ gallons of highly polluted leachate that threatened groundwater serving as the only source of drinking water for 30,000 Marines and their families. Top-level Regional Board staff made the following comment:

"There has never been a cleanup order in this county that has dealt with construction deficiencies like what we've seen at Las Pulgas," said John Odermatt, a senior engineering geologist for the water board. "I have never seen an engineering-related problem this large at another landfill."

<http://www.signonsandiego.com/news/military/20060330-9999-1mc30landfil.html>

Yes Board members...but what if there was an even more catastrophic, and more costly, "problem" following an adaptation by your board. Unfortunately, Las Pulgas, and even the totality of Pendleton's other widely ranging environmental damages are diminutive in light of Gregory Canyon's potential destruction.

Camp Pendleton, San Diego County's sole EPA Superfund site, serves as a minor illustration as to what Gregory Canyon could become should your board adopt waste discharge requirements. \$250,000,000 is an estimate of what it will cost to merely survey environmental damage to Pendleton. <http://www.signonsandiego.com/news/military/20051122-9999-1n22pollute.html> This incredible sum includes nothing for actual clean up and remediation efforts. While Las Pulgas itself is not a Superfund site, a defective at-capacity Gregory Canyon landfill certainly will be.

In contrast to 56 shallow acres at Las Pulgas landfill, Gregory Canyon will be 183 acres, containing 31 million tons of garbage at phase out. The quantity of poisonous liquid leachate in this toxic crucible is unimaginable. Any failure – design, engineering, or seismic - could deliver this poison to ground and surface water sources unimpeded by any human remedial actions. Such is the horrifically obvious result when a class III landfill is sited on the border of a wild river flood plain.

I had the privilege of attending the Gregory Canyon workshop and listening to an overwhelming oratory of technical reasons why Gregory Canyon cannot be allowed to proceed. Among the most thoroughly described included the historically inevitable failure of any liner system and the unthinkable results of such a release upon failure into the San Luis Rey River and underlying aquifer. .

I request that each Board member personally asks staff whether there is any possibility of a constructed Gregory Canyon landfill to contaminate the groundwater drinking water supply for the City of Oceanside and its 173,000 residents. Should any possibility of poisoning this drinking water exist, I urge your responsible action in denying any tentative wastewater discharge requirements proposed for Gregory Canyon as inadequate to safeguard Oceanside's drinking water supply and the San Luis Rey River.

Commenter: George Courser -- Backcountry Coalition

Section:

Comment:

This water cannot be replaced by any means at this time. The water is not there.

Commenter: George Courser -- Backcountry Coalition

Section:

Comment:

I would like to address something that's been mentioned, which is the geological hazards present. There is no liner system that is immune from an earthquake or slippage, and certainly we have these factors present.

Commenter: Crystal Crawford -- City of Del Mar

Section:

Comment:

Although the Tentative Order No. R9-2009-0004, if adopted, is meant to prescribe conditions and mitigation for a Clean Water Act Section 401 Water Quality Certification for discharges of inert fill materials to waters of the United States and prescribe waste discharge requirements, the City of Del Mar continues to oppose the building of a landfill in this location and thus opposes the issuance of this Tentative Order. We urge alternate locations to be evaluated for the disposal of solid waste generated in North County San Diego, and that the proposal for a landfill in this location be abandoned.

Commenter: Dave Crowell -- Private Individual

Section:

Comment:

I just wanted you to know that, as an Oceanside resident that lives downstream of this proposed project, it would make more sense for me to just dump my garbage in the vacant lot out back.. the waste would go to the same drainage and still affect my kids when we play at the beach.. but at least it would save my city the money that they'd spend on moving the garbage upstream with the same end result.

This is an ill-thought project. Don't support it.

Commenter: Dave Crowell -- Private Individual

Section:**Comment:**

I just wanted you to know that, as an Oceanside resident that lives downstream of this proposed project, it would make more sense for me to just dump my garbage in the vacant lot out back.. the waste would go to the same drainage and still affect my kids when we play at the beach.. but at least it would save my city the money that they'd spend on moving the garbage upstream with the same end result.

This is an ill-thought project. Don't support it.

Commenter: Christopher del Riego -- Private Individual

Section:**Comment:**

This letter is to voice my strong opposition to the Gregory Canyon Landfill proposal. The evidence shows it to be a highly unstable means of waste containment, near a critical water source for humans and wildlife. In these times of water shortage, such projects should not be allowed to put a critical resource at risk.

Commenter: Everett Delano -- Riverwatch

Section:**Comment:**

I think you've heard several comments today expressing concerns about some of the impacts and potential impacts upon those beneficial uses. And frankly, I think some of the draft technical report's own language recognizes the potential impacts, potential very serious consequences and impacts upon beneficial uses. . .

Start with the notion of fractured bedrock. It's discussed at several points throughout the staff report. There's several discussions talking about the ability for pollutants to be transported rapidly. The fact that the monitoring plan is insufficient. There is not sufficient information to show that the monitoring report meets the standards.

. . . The answer to those questions is the replacement water contingency plan. And I wonder whether that's really where all the eggs should be for this basket. I wonder whether you really intend to say that it's a result of the fact that the pollution may be transported rapidly, and as a result of the fact that the pollution may be transported rapidly, and as a result of the fact that you really don't have a good monitoring system. We're going to hope that at some point in the future, someone will be able to come up with an adequate contingency plan, adequate way way to replace the water that is lost. . .

Who determines whether a groundwater source or water source has been affected by the landfill's discharges? How is that determination made? I can guarantee you, the discharger or the applicant will certainly not be the first party standing up and saying, "Oh, it was us. We got to go replace a bunch of water." I can guarantee you that that will go on for quite some time. What happens during the interim period? Who makes that determination? The way the WDRs are written, it seems to be the discharger. It seems to say the discharger makes the determination that whether or not somebody's water supply has been affected. Once that water supply has been affected, how are the determinations made as to what impact that was, how big was that effect, what is needed to be done? Again, I could imagine years of technical reports.

At the moment there is no reliable water supply source for the needs of the landfill itself. The State Board rejected the appropriate rights application for their water source. It would be very important for this agency to know, where is their protective water source coming from? Do you have the confidence that they won't be overusing the groundwater source in the area in order to make up for what they currently have as a serious deficiency in the water supply?

Commenter: Everett Delano -- Riverwatch

Section:

Comment:

I've been in Regional Water Board workshops in the past that were a little less formal, if you will, San Diego Electric, speaking to people on the daises. I think the reason you may be in this position right now is because, in reality, much of what you're hearing is that this permit shouldn't even be approved. So I think one of the first questions for this Board staff, . . . is will you be informing the Board at the time of this hearing, and the public, that this permit is a discretionary action on the part of this Board? That is, this Board can reject this permit, if for no other reason, than for the simple and fundamental requirements of the Regional Water Board that ensured the protection of the beneficial uses of the waters of the State.

Commenter: Norma Denny -- Private Individual

Section:

Comment:

Here we are in a serious "DROUGHT" situation, and it is only going to get worse. We have had our water usage cut and they will be cutting it more and they want to put in a new Landfill????????? Do you realize how much water that will take in the management of the Landfill????? Where is the intelligence of these people????

I use to get so much "JUNK" mail that I finally got tired of putting it in my trash and filling my landfill with advertising and solicitations from people out of my area and state, that I began drawing a line through my name and address and writing RETURN TO SENDER on the envelope. After a few months of doing this it worked. They quit sending me all the junk mail. That meant less trash in my landfill. Everyone should do the same!

Commenter: Steve Deutsch -- Private Individual

Section:

Comment:

I urge the Regional Board to oppose the Gregory Canyon Landfill project in northern San Diego County and to deny its pending permit application ("Waste Discharge Permit"). We need clean drinking water, we to understand what it is to share this planet with its other inhabitants, we need to stop creating so much trash, and we should act with the intention of keeping thin planet habitable for out children.

Commenter: S Dorsmith -- Private Individual

Section:

Comment:

Please do an Environmental Impact study on the Gregory Canyon before a landfill is made of the area.

Commenter: Nancy Ellestad -- Private Individual

Section:

Comment:

please stop the Gregory Canyon Landfill!!!

Commenter: Susan Engle -- Private Individual

Section:

Comment:

Furthermore, the project will emit unacceptable levels of methane, a greenhouse gas plus other toxic gas emissions. The Gregory Canyon Landfill if approved will continue the now discouraged and soon-to-be obsolete practice to accept compostable solid waste compostable (organic matter), the source of methane gas. In fact it proposes to use green wastes as an alternative daily cover. The California Integrated Waste

Management Board June 18, 2009 press release reports on their program to divert organic wastes from landfills and use it for biogas energy generation to reduce greenhouse gas emission from landfills. The Sierra Club also supports diversion of organic matter from landfills to minimize the generation of methane gas. Studies have shown that landfill gas collection systems are not effective to limit gas emissions to acceptable levels. The Joint Technical Document fails to address the health effects of toxic gas emission to persons residing and/or working within a 2 mile radius of the landfill.

Commenter: Susan Engle -- Private Individual

Section:

Comment:

The JTD uses outdated information to estimate the composition of the chemicals of concern. The JTD fails to recognize the increasing use of batteries, compact fluorescent lamps as well as conventional fluorescent tubes, which contain mercury, are discarded at end of life and get into the landfill due to ineffective hazardous matter collection systems. Municipal landfill studies show measurable mercury in the leachate and gas emissions via the landfill working face and the buried solid wastes posing environmental and human health risks.

Commenter: Susan Engle -- Private Individual

Section:

Comment:

The water replacement plan will be impossible to implement. It assumes that replacement water will be available and the landfill owner will have the resources to deliver it.

Commenter: Susan Engle -- Private Individual

Section:

Comment:

Mitigation of a leak is questionable at best. To mitigate the leaks that contaminate the groundwater, the project proposes to filter the contaminated groundwater. As it is not possible to predict the direction, and multiple paths of the leachate leaks, it is very questionable that the filtering mitigation to restore water quality will be effective to protect human health.

Commenter: Delores Ervin -- Private Individual

Section:

Comment:

I definitely oppose using this location for a dump. I believe there is no guarantee that the garbage dumped in this location will not contaminate the water in the San Luis Rey River. The contamination cannot be reversed. I believe further investigation for a site that will be no hazard to humans as well as wild life should be pursued before acting in haste.

Commenter: Dale Essary -- RWQCB, Central Valley Region

Section: Finding 11

Comment:

Inconsistency between Finding 10.a.(i) and Finding 11.

Commenter: Dale Essary -- RWQCB, Central Valley Region

Section: Landfill Construction Specification E.7.c.(1)

Comment:

The requirement to perform an electrical leak location survey of geomembranes under Landfill Construction Specification E.7.c.(1) includes this directive on sideslopes. Has the Discharger (or anybody else) approached you, or have you looked into, the feasibility of sideslope leak tests, particularly at a canyon fill liner design where the slopes may be somewhat steep? (Just wondering -- I am of the impression that electrical leak location surveys are feasible only on slopes up to 5:1).

Commenter: Dale Essary -- RWQCB, Central Valley Region

Section: Landfill Operation Specification D.4

Comment:

It states in Landfill Operation Specification D.4 that groundwater separation of five feet from waste must be maintained. It appears to me that the overall thickness of the robust liner design assures this, by virtue of the 24-inch operations layer, the 12-inch primary gravel LCRS, the 9-inch secondary gravel LCRS, the 24-inch secondary compacted clay liner component, and the 12-inch gravel subdrain.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section:

Comment:

This letter is provided by the U.S. Bureau of Indian Affairs Southern California Agency, (BIA), to review and comment on Tentative Order No. R9-2009-0004, Waste Discharge Requirements, (WDR), for the Gregory Canyon Landfill, located in the County of San Diego, California. It is BIA

understanding that the California Regional Water Quality Control Board, San Diego Region, (RegionalBoard), is considering adoption of waste discharge requirements, (WDR), for the proposed Landfill. The following letter documents BIA's overall standpoint regarding this proposed project. Selected comments on the WDR for the proposed Gregory Canyon Landfill are tabulated in Enclosure 1.

The BIA is the oldest bureau of the United States Department of the Interior. Established in 1824, the BIA provides services to approximately 1.7 million American Indians and Alaska Natives. Among the many duties of the BIA, as established by the United States Congress, is to serve as an advocate for the sovereignty and rights of tribes in dealing with other governmental entities and, to fulfill and execute the Federal Government's trust responsibility to American Indian Tribes. All federal agencies share in this trust responsibility.

Gregory Canyon is south of the San Luis Rey River and State Highway 76, it is located in an area of great natural beauty which is the entrance to the Pala Indian Reservation as well as six other Native American tribal reserves located along this State Highway. It would be a shame to approve a municipal landfill at the gateway to one of the last historical strongholds of Native American Population in Southern California.

The portion of Gregory Canyon where the proposed Municipal Waste Landfill, (MWLF). Is planned, is not part of the Pala Indian Reservation, it is however; located adjacent to sacred Indian Cultural sites of great significance both to Indian and scientific communities in the region.

We share concern along with the Pala Band of Mission Indians that obvious issues regarding the location of this MWLF are being masked by the land owner. By continuing to seek permit approval to operate a MWLF from various federal, state and local authorities, the land owner is avoiding the fact that the proposed location has cultural, biological, geological, hydrological, environmental and sociological significance to the communities that reside in Northern San Diego County. The issue of this landfill being proposed in Gregory Canyon is inappropriate for both state and federally recognized governments. The BIA would like to clarify our position; we believe that utilizing unrelated permit approval processes and ultimately submitting these permits as a means to gain acceptance from the Regional Board, segments consideration for environmental impacts. Furthermore; it avoids consideration of the cumulative impacts the proposed municipal solid waste landfill will have on the environment and the local communities.

Gregory Canyon drains into the San Luis Rey River which is part of the San Luis Rey Watershed, one of the major watershed river systems in San Diego County. The portion of the San Luis Rey River that abuts the mouth of Gregory Canyon is owned by the Pala Band of Mission Indians.

Existing water ponds formed by previous sand mining operations are now present. It is the contention of the BIA that these ponds as presently occurring are aiding in the replenishment of the San Luis Rey Watershed and Pala Sub-Basin, as well as becoming a wetlands area providing significant relief to the local wildlife and ecological habitat of northern San Diego County. The close proximity of the proposed MWLF poses an imminent risk to the fragile ecological river system which supports both human and environmental needs.

Historical events in the last 100 years have greatly altered the hydrology of the river, these anthropogenic actions include 1) the building of Lake Henshaw Dam, 2) the Canal Diversion to Escondido located ten miles below Lake Henshaw, 3) Imported Colorado River water, and 4) Increased salt loads entering the groundwater from storm water and agricultural irrigation runoff. Cumulative effects of these influences coupled with further industrial use by creating a MWLF will disrupt an already fragile natural resource and will be another item hindering recovery efforts

being implemented by the San Luis Rey Resource Conservation District, the City of Oceanside, and other local, state and federal agencies.

Briefly, The BIA objects to the following methodology presented in the WDR:

- The Discharger being a Limited Liability Company.
- The lack of financial assurances for the project outlined in this document.
- The location of the proposed landfill.
- Non-compliance with federal requirements.
- No methodology regarding protecting significant cultural resources.
- No mention for removal or replacement or protection of existing oak trees located in Gregory Canyon.
- Generic construction requirements rather than being site specific.
- The containment structure in relation to site specific geology and topographic concern.
- Topographic concern regarding storm water run-off.
- The inadequately engineered proposed sub-drain system.
- The lack of geotechnical recommendations for removal and replacement of existing natural ground prior to artificial fill/ waste placement.
- The lack of commenting on existing terrain and topography regarding recommendations for engineering embankments.
- No Mention of cut/ fill transition zones or benching requirements.
- No Mention of blasting requirements.
- No Mention of oversize rock disposal generated from initial grading and/or blasting.
- No preliminary geotechnical information for either the proposed landfill or the borrow areas.
- Inadequate discussion on hydrology, the San Luis Rey River, or the drought crisis in San Diego County.
- The lack of information regarding the movement, chemistry and ultimate fate of contaminant plumes that will migrate through the alluvial and fractured rock aquifer systems beneath the landfill.
- The replacement water contingency plan.
- The lack of fill Material for the project
- The lack of gradational fill cover and bedding requirements.
- The lack of water for the project.
- Waste discharge requirements as relates to federal regulation.
- The illusion that this project will have no significant impact to the community or to the environment.

More explicit comments are detailed in Enclosure 1.

The BIA presents this letter not merely as comments to the Regional Boards WDR, but as a call to consider the inherent rights of the Native American population that make Northern San Diego County their home. These tribes are on par with the United States. That is, these tribes exercise inherent sovereign authority over their members and territories. This authority is not a

delegation from the United States or any other government; rather it is founded by historical consequential status as independent nations. Within this authority tribes hold federally reserved rights to trust water, cultural, and natural resources. It is the responsibility, of all federal and state agencies to protect these sovereign trust resources for future generations to come, to be good stewards to the environment and to be good neighbors, not only for federal reserves but also for the state of California.

It is therefore; the intent of the BIA to be proactive with the Pala Band of Mission Indians, to stand by their side to voice concerns regarding this MWLF as it relates to the above mentioned topics, as well as; addressing federally reserved trust natural resources both from a quantitative and qualitative perspective.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section:

Comment:

Pages 13 & 14, item A, Prohibitions, and Pages 14 & 15 item B, General Discharge Specifications:
There is no mention of federal requirements.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section:

Comment:

The content of this subsection is generic and not site specific. This section does not address concerns of the region or the specific engineering requirements necessary to construct artificial embankments that will protect the surrounding lands in north County. This section should also be updated to reflect recent changes in state law.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section:

Comment:

There is no mention of fill specification in this section. It is unclear why this section is labeled "Fill Specifications".

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section:

Comment:

No mention of the location of discharge into the San Luis Rey River or the cumulative effects this discharge will have with other concerns of the region. The federal regulation of the Clean Water Act as defined in section 404 is not addressed for surface water ways of the U.S.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: D.6.g

Comment:

Paragraph g. of this section does not address where the sediment will be transported for disposal or standard testing methods to be conducted on desiltation materials for assurance of non-hazardous classification once removed from the desiltation basins constructed for the project. If Hazardous classification of these materials is determined, the Discharger should list facilities these materials will be transported to and list standard methods required for transporting such materials.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: D.7

Comment:

Of this section the BIA will comment on when the amendment becomes available. As discussed on page 6 item 15 section for- "Industrial and Construction Storm Water Discharges".

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: E.10

Comment:

There are no gradational or compaction requirements for land fill cover presented. It is recommended that specific recommendation be included for this project. It is also assumed that the discharger does not have enough cover to complete this project, it is therefore requested that the discharger provide alternative source location for suitable imported materials.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: E.2

Comment:

See comments on Finding No. 10.e and on E.5.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: E.3**Comment:**

No mention of specification of liners or how they will be sealed to prevent leaks. Please note that these liners will be placed on a subdrain system that is not defined. The Gregory Canyon is founded on a fractured bedrock structure which local residence depends on for potable water.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: E.4**Comment:**

A. Standards for slope stability should be listed as to what requirements will be followed.

B. All interim Cut/Fill slopes should be designed, constructed and approved by a registered Engineering Geologist and registered Civil engineer certified in the State of California.

C. All temporary Slopes should be treated as in the above stated requirement for slopes.

D. Waters of the U.S. should also be included in this paragraph.

E. All interim Cut/Fill slopes should be designed, constructed and approved by a registered Engineering Geologist and registered Civil engineer certified in the State of California. Fill slopes should be designed not to exceed horizontal-to- vertical ration of 2:1, without benching, maximum height should not exceed 30 feet without benching and slope drains should be designed by the proper authorities for the project. Cut slopes and temporary cutbacks have not been addressed.

F. This paragraph is ambiguous, it should be re-written to incorporate the above comment.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: E.5**Comment:**

Foundation sub-grades should have cut/ fill and blasting recommendations and requirements set forth by a registered Geotechnical Engineer certified in the state of California. Perforated sub-drains should be placed only on bedrock basement materials to prevent saturation of underlying topsoil/ alluvium/ colluviums soils which should not be left in situ. This section should be rewritten to address the specific requirements of the area. Greater thought should be given for the protection of natural resources in the area. Removal criteria should be presented in a three dimensional format. No mention of benching back into the sidewalls of this extremely steep canyon or recommendations to prevent slippage of the linear, waste and artificial fill which will be used to construct the final embankment has been presented. There are no general details to aid the reader and more importantly the Discharger to construct the MWLF.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: E.6

Comment:

There is no mention of how this liner system will be sealed. It is assumed that the discharger intends to simply overlay the liner panels which the BIA feels is not adequate for a MWLF being located in such an environmentally sensitive area.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: E.7

Comment:

The Waste Management Unit should be designed and constructed by both a registered civil engineer and certified engineering geologist. It is felt that leak detection surveys are inadequate for the intended use of this project. The liner panels are not specified to be sealed and the MWLF will be constructed on a fractured bedrock geologic structure. The potential for major subsurface contamination is imminent.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: E.8

Comment:

There are no standard or general details to aid the reader and more importantly the Discharger to construct the collection and removal system.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: Finding No. 1

Comment:

Gregory Canyon Limited a California Limited Liability Company is the Discharger and assumed to be the Property Owner of Gregory Canyon. Why is the land owner a limited liability company? What limits does this company have regarding waste discharge requirements for the proposed landfill and what assurances are being presented to eliminate the obvious risk to the environment, particularly to the watershed?

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: Finding No. 10

Comment:

The Containment Structure is considered inadequate from the perspective of the above mentioned comments. The design does not take into account the geotechnical consideration for the local topography, the steep sloping terrain occurring on the sidewalls of the canyon, the presence of the Elsinore/ Laguna Salada Fault System, the potential for structural failure of the MWLF due to differential settlement where the liner will be installed and the cumulative impact these risks pose to the San Luis River Watershed system.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: Finding No. 10.e

Comment:

The Sub-drain system for the proposed MWLF is considered inadequate from a geotechnical perspective. There is no mention of back drains, or slope drains tying into the sub-drain system. In the areas of bedrock and artificial waste fill contact, there is no mention of water compromising the integrity of the containment structure by sub-surface intrusion, or mitigation methods designed to prevent flow of water away from these sensitive areas. Sub-drain foundation requirements are not specified. Filter material, filter fabric and schedule pipe requirements for the drain system is not listed. There are no standard details listed to understand how this drain system will be required to be installed or what type of ground the system will be placed.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: Finding No. 12

Comment:

It is understood that Borrow/ Stockpile "A" will utilize materials to cap the MWLF at the end of the life of the project. Furthermore, it is our understanding that approximately 1.3 million cubic yards of material will be excavated, and stockpiled prior to use. The borrow site is planned for excavations ranging from ten to sixty-five feet below existing ground surface.

There is no preliminary geotechnical evaluation, boring logs, test pit logs or soil sampling analysis presented to demonstrate that the planned materials are suitable for its intended use.

There is no mention of excavation activity for Borrow/Stockpile "B". It is assumed that imported soils will be stockpiled and no excavation will be used as capping material for the MWLF.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: Finding No. 13

Comment:

This paragraph is ambiguous, it is not understood how the owner has come up with 8.4 million cubic yards of material to be generated on site. It is unclear why the site will be short 4.3 million cubic yards and why is the project short of capping material if the facility is stockpiling 1.3 million cubic yards as explained in item 12.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: Finding No. 14

Comment:

A permit under section 404 of the Clean Water act should be obtained to discharge effluent into the San Luis Rey River. The disposal facility for brine disposal should be listed.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: Finding No. 15

Comment:

The Bureau of Indian Affairs will comment on this section when the amendment becomes available.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: Finding No. 16

Comment:

There is no mention of the quantity of surface water anticipated to be generated during storm events or the impact to down stream communities. It is unclear if the designed surface water drainage system is adequate.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: Finding No. 19

Comment:

San Diego County has limited groundwater storage capacity. The San Luis Rey Watershed is one of the major water bearing aquifer systems in the county. Only 16 percent of potable water comes from the region, leaving 84 percent of potable water being imported from outside sources. The State of California is currently planning for decreased water supply due to changing weather patterns and is seeking alternative source solutions to the realization of decreased water availability. It is misleading to assume that the Discharger will be able to supply private and public well owners and other parties with a contingency water supply. It is also misleading to assume that an accurate detection monitoring unit can be installed to identify leaks for a MWLF placed on a fractured Igneous intrusive bedrock formation located in the Elsinore/Laguna Salada Fault system.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: Finding No. 2

Comment:

This paragraph is misleading. Gregory Canyon borders the Pala Indian Reservation

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: Finding No. 22

Comment:

A permit under section 404 of the Clean Water act should be obtained to discharge effluent into the San Luis Rey River. The BIA Respectfully disagrees with the statement the project will not have a significant impact on water quality.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: Finding No. 23

Comment:

There is no mention of posting Bonds, Letters of Credit or any other financial method to assure proper remediation in case of landfill failure or closure and post closure requirements being accomplished. The BIA respectfully disagrees with waiving any environmental code requiring financial assurance that the MWLF will be maintained and closed to the highest standard for protecting the watershed.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: Finding No. 25

Comment:

The BIA respectfully disagrees with the methodology presented in this section of the Waste Discharge Requirements. Even though it has been interpreted that the MWLF is physically outside the limit of Federal US Surface Waters, The MWLF will eventually have to discharge into U.S. surface waters and therefore; should be required to comply with federal law. Construction of a road across the San Luis River is just one facet of the total construction as well as industrial operation for the MWLF. This section misleads the reader into believing that all environmental regulation has been complied with.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: Finding No. 28

Comment:

The BIA does not agree that all water resource factors have been considered and respectfully request the Regional Board to reconsider this order.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: Finding No. 4

Comment:

How can the Discharger being a limited liability company give any assurance to the surrounding community that municipal solid wastes can be managed properly to protect the water ways of the United States. More specifically how is the Discharger addressing potential contamination of adjacent groundwater supply to current water supply wells north and northeast of the project in the Pala Sub-Basin. Principally, the impacts produced by reversed groundwater flow gradients during times of drought.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: Finding No. 5

Comment:

The Bureau of Indian Affairs does not believe that the Discharger complies with the Code of Federal Regulation, Title 40. Part 258, (hereinafter. CFR Title 40, Part 258) as follows:

1. § CFR Title 40, Part 258.13 Fault Areas-The Discharger has not demonstrated that the structural design of the proposed landfill will protect the environment namely the San Luis Rey Watershed,
2. § CFR Title 40, Part 258.14 Seismic Impact Zones- design criteria of the MWLF units do not take into consideration the topography of the terrain coupled with the Elsinore/ Laguna Salada fault system in relation to structural design. Environmental protection controls and the potential stability of the liner system have not been demonstrated.
3. § CFR Title 40, Part 258.15 Unstable Areas- The design criteria of the MWLF units does not demonstrate the stability of the project. Given the steep topography and geomorphology of Gregory Canyon as well as the canyon out-letting to the lip of the San Luis Rey River poses concern for the placement of nonstructural waste materials in the volumes presented for this project. The discharger has not demonstrated structural stability of the proposed embankments. Based on these factors, there is a high probability of differential settlement between the bedrock contacts and artificial fill /waste materials planned to be placed.
4. § CFR Title 40, Part 258.20 Procedures for Excluding the Receipt of Hazardous Waste- Procedures for commercial waste, industrial wastes and construction waste disposal are not adequate given the sensitivity of the surrounding ecological system and San Luis River Watershed.
5. § CFR Title 40, Part 258.27 Surface Water Requirements- Gregory Canyon is a tributary which is susceptible to flash flooding. Given the close proximity to the San Luis Rey River, discharge to the waters of the United States including wetlands violates any requirement of an area-wide or State-wide water quality management plan that has been approved under section 208 319 of the Clean Water Act, as amended.

6. § CFR Title 40, Part 258.40 Design Criteria- The following factors have not been considered adequately addressed.

- The hydro-geological characteristics of surrounding lands;
- The quantity, quality, and direction of flow of groundwater;
- The proximity and withdrawal rate of the ground-water users;
- The availability of alternative drinking water supplies, particularly for the Pala Indian reservation who's sole source of potable water comes from the Pala Sub-Basin.
- The existing quality of the ground water, including other sources of contamination and their cumulative impacts, and whether the ground water is currently used or reasonably expected to be used for drinking water; It should be noted the Pala Sub-Basin is the sole source of potable drinking water for the Pala Indian Reservation. And;
- Public Health Safety and Welfare effects.

7. § CFR Title 40, Part 258.50 Applicability- Resource values of the underlying and down gradient aquifer system including proximity, groundwater quality and quantity, as well as current and future use of the aquifer system has not been considered.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: Finding No. 6

Comment:

The description of the existing hydrogeology is inadequate upon which to analyze the project and address significant impacts.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: Finding No. 7

Comment:

This paragraph is misleading. There is no mention of the Pala Sub-Basin which is the sole source of potable water to the Pala Reservation.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: Finding No. 8

Comment:

The Bureau of Indian Affairs does not believe that the discharger complies with the Code of Federal Regulation, Title 40, Part 258, Subparts B, D, and E as follows:

- § CFR Title 40, Part 258.11 Flood Plains- The discharger has not demonstrated washout risk of solid waste into the San Luis Rey Flood Plain which poses hazard to human health and the environment.

- § CFR.12 Title 40, Part 258.12 wetlands- No mention of section 404 of the Clean Water act is presented regarding discharging into the Waterways of the United States, namely the San Luis Rey River. The portion of the river at the lip of Gregory Canyon is owned by the Pala Band of Mission Indians. Existing water ponds formed by previous sand mining operations are now present. It is the contention of the Bureau of Indian Affairs that these ponds as presently occurring are aiding in the replenishment of the San Luis Rey Watershed and Pala Sub-Basin as well as becoming a wetlands area providing significant relief to the local wildlife and ecological habitat of northern San Diego County. The close proximity of the proposed MWLF has not demonstrated requirements set forth in this section as relates to the San Luis Rey River or the Federal Reserve held in Trust by the United States for the Pala Band of Mission Indians.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: H.12

Comment:

The State of California is currently planning for decreased water supply due to changing weather patterns and is seeking alternative source solutions to the realization of decreased water availability. It is misleading to assume that the Discharger will be able to supply private and public well owners and other parties with a contingency water supply.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: H.17

Comment:

No mention of section 404 of the Clean Water act is presented regarding discharging into the Waterways of the United States, namely the San Luis Rey River. The Code of Federal Regulations should be included in this section.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: H.4

Comment:

This section seems grossly inadequate for the purpose of insuring this MWLF meets with requirements to protect the environment. There is no mention of Bonding for this work. Financial Assurance should be provided before the WDR is approved. The costs lined out within this section seems small, there is no detailed cost analysis to determine if these costs are relevant.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: H.6

Comment:

This section is written in a fashion to give the discharger a way out of the WDR. It appears the Regional Board is not protected.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: H.9

Comment:

The Regional Board should be allowed to enter inspect, the premises at anytime they think fit or have reason to believe an inspection is necessary.

Commenter: James Fletcher -- U.S. Department of the Interior, Bureau of Indian Affairs

Section: I.3

Comment:

The Preliminary design should be prepared and reviewed prior to the WDR being approved.

Commenter: Jeff Fox -- Private Individual

Section:

Comment:

I find it concerning, to have it be a visible course of action to place a landfill near a water source. While assurances to the containability of a landfill are nice to hear and those making those assurances are sincere, the reality is basically that a fill won't leak tomorrow or next year but eventually everything breaks down and the aquifer will still be there (hopefully). We wash our hands before we eat, we have a separate room to deal with our wastes. Please don't allow garbage near water supplies.

Commenter: Patsy Fritz -- Private Individual

Section:

Comment:

First, let me credit the developers of Gregory Canyon with the highest design technology. But nobody can guarantee a leak-free dump, and they haven't tried to do this. They're honest.

We know nature can be harsh ... brutal. This is a region of known, and yet-to-be discovered, earthquake faults.

Supposing Gregory Canyon functions perfectly for fifty years. Long after the revenue stream has played out for the developers. Then CRACK! The earth shifts. Slowly, seepage leaches out. The aquifer is contaminated ... for hundreds of thousands of years.

Commenter: Shasta Gaughen -- Pala Band of Mission Indians

Section:

Comment:

This letter is in response to Tentative Order No. R9-2009-0004, Waste Discharge Requirements for the Gregory Canyon Landfill. As the Pala Band of Mission Indians' Tribal Historic Preservation Officer (THPO), it is my duty to fulfill federal and state requirements for the protection and preservation of historic, cultural, and archaeological resources within the Pala Reservation. My job also includes overseeing and consulting on projects, permits, and/or zoning changes that may affect properties within the Pala band's Traditional Use Area (TUA), an area which includes the proposed site of the Gregory Canyon Landfill.

The Gregory Canyon landfill project is an environmental, cultural, and political affront to the Luiseno and Cupeno people of Pala and neighboring reservations. The very word, Pala, means water in the Luiseno language. The idea that water, the life of the people, could be contaminated by the presence of a garbage dump is appalling to those who see the San Luis Rey River's very existence as sacred. The San Luis Rey River watershed is lined from headwaters to ocean with important archaeological sites and other areas of cultural significance. Chokla, the traditional name of Gregory Mountain, is one of these sacred sites. It is one of the resting places of Takwic, an important spiritual figure to the Pala people. In the shadow of the mountain, just on the boundary of the proposed landfill, is Medicine Rock, another sacred site linked to fasting, prayer, and puberty rituals. It is a mistake to treat these sacred sites as separate from the sacred and life-giving water of the San Luis Rey river and its watershed. Chokla, Medicine Rock, and the San Luis Rey River together form a spiritual nexus, a place of cultural and religious significance that cannot be overstated. Allowing the Gregory Canyon Landfill in this site is akin to building a dump next to Jerusalem's Wailing Wall, or St. Peter's Basilica in Rome.

I have often found that many people are skeptical when Indian tribes claim that an area has sacred or religious significance. This is because Indian spiritual and religious customs are not celebrated in the public eye. Sacred sites, such as those listed with the Native American Heritage Commission (a list which includes Chokla), are kept in confidence for a good reason. Public exposure, vandalism, and desecration are just some of the consequences Indian people fear when considering whether or not to reveal the location of sacred sites. For this reason, Pala has long been hesitant to discuss the spiritual significance of Chokla in detail. However, when the landfill project was first proposed over twenty years ago, Pala - and other Luiseno bands - realized that the risk of exposure was far outweighed by the risk of their mountain and their river being desecrated by the Gregory Canyon garbage dump. Do not be fooled by arguments that Pala's opposition stems from their casino, or that there is no archaeological evidence testifying to Chokla's significance. Native ways of knowing and navigating the spiritual and sacred often leave no trace on the land - yet, the mark they leave on the cultural lives of the people is indelible. Allowing the desecration of Chokla and the San Luis Rey river with a landfill is allowing the desecration of the spiritual heart of a people with a long history of suffering and inequality.

I realize that the job of the Regional Water Quality Control Board is to evaluate proposals that may have an impact on the physical and environmental aspects of water quality. However, I am asking that you also consider the cultural and spiritual impact of your decision. The only appropriate course of action for protecting Pala's sacred mountain and the life-giving water of the San Luis Rey is to deny the waste discharge permit for the Gregory Canyon Landfill. I urge you to act accordingly.

Commenter: Angela Goldberg -- Private Individual

Section:

Comment:

Due to the location on fractured rock, the landfill will leak in due time. The proposed composite landfill liner is not sufficient to avoid contamination of our critical water supply. The mitigation measure of filtering is not reliable. These factors must be considered in any decisions to move forward.

Commenter: Jennifer Gonzalez -- Private Individual

Section:

Comment:

Land fills are necessary; although they should be eventually phased out altogether when we have greener waste management systems in place.

It is time for us all to take a good look at the way we waste our landscapes and precious natural sites just to manage our daily garbage.

Commenter: Jerry Gourley -- Private Individual

Section:

Comment:

I, myself, am infuriated to read of this "plan" for another dump on a clean and unspoiled stretch of land. In the eyes of these "developers", such lands are "...just wastelands...", that were put here only for their benefit. They keep on demonstrating 'no care', whatsoever, about how there are so many others who feel these lands are far more than just plain beautiful.

Do not let this dump happen.

Commenter: Eric Greenfield -- Private Individual

Section:

Comment:

I'm opposed to permitting the Gregory Canyon Landfill because it will pollute our scarce & essential ground-water, require daily operation which will disturb a populated area, and encourage our present unacceptable discard (by general public) of recycleable materials.

Years ago (15) my late father Eugene W. Greenfield (Electrical Engineer, PhD.) testified to the Board that the liner-materials (polyethylenes) develop "water-treeing" and break down under landfills.

Please do not adopt the Tentative Order for Gregory Canyon Landfill.

Commenter: Theodore Griswold -- Procopio

Section:

Comment:

The Regional Board relied significantly on the State Water Resources Control Board for issues regarding slope stability, groundwater movement and the replacement water plant. The public should be able to ask the State Board representative questions regarding these issues.

The Regional Board should schedule another workshop to discuss issues that were not discussed on April 29, 2009.

Commenter: Candace Hallmark -- Private Individual

Section:

Comment:

The most important and meaningful action we can take today to ensure the future of America by protecting our environment. Please do not approve the landfill proposal as it will snowball into negative and harmful impacts upon water supply and wildlife. Water will become the next crisis in America--it's only a matter of time. Please help America protect its dwindling water supply.

Commenter: Ruth Harber -- Riverwatch

Section:

Comment:

The Regional Water Quality Control Board of our State has one primary duty – that is to keep our water safe – in this case, to keep leachates from a garbage dump from filtering into the groundwater. The promoters of this dump give you many guarantees that their liner(s) will not leak. May I remind you that even the manufacturers of these liners do not guarantee that they will not leak at one time or another.

Your staff has no doubt researched the project to the nth degree – many on staff are unhappy with the project - but they had a job to do. Now, your job is to consider not only their research

but the huge public, organizations and local government opposition and to listen to the voice of experts who have nothing to gain by opposing this project except clean water.

In these times of drought – with supplies dwindling from year to year, it just doesn't make sense to allow a dump at the edge of a river which is the source of potable water for thousands of individuals. It is the duty of the Regional Water Quality Control Board to deny this pollution of the San Luis Rey river.

Commenter: Ruth Harber -- Riverwatch

Section:

Comment:

Some people will go to any lengths, do anything, to win. Case in point: At the April 29, 2009 meeting where the Regional Quality Control Water Board staff heard comments from the public, two dozen or so high school kids 16 and 17 years old, were wearing a yellow sticker "I support the Gregory Canyon Landfill". Most of the participants in this workshop were vocal opponents of this trash dump -- some for as long as twenty years.

I have spent twenty years fighting this dump. As the meeting dragged, I took a breather and walked to the hallway. There, one young man, he said he was 17, approached and said he was moved by my presentation and it made him thoughtful about the environment. He wanted my autograph!

We talked and he confessed that he had been paid to attend the meeting! Who paid him, I asked. He said the Gregory Canyon Ltd. people (the proponents of this dump). And now, he wasn't sure he was doing the right thing! He was part of a class in Carlsbad, California, that sat through a "selling of the dump" presentation and an invitation to make a little money by showing up at this meeting wearing the yellow sticker!

I believe I convinced him that the proposed dump was a bad site, that it was a time bomb and that if this Board were to give a permit to the proponents for this dump at the edge of the San Luis Rey river, they would be playing Russian roulette with the water supply of tens of thousands of people. The young man willingly gave up his yellow sticker - I went back to the meeting.

Later, as we all were leaving the room, I saw him again and .. he was again wearing a yellow sticker - of course, I asked him why. His response: "I was told to wear it or I wouldn't get paid"!

As I said, some people will go to any lengths to win! That is so pathetic! Bringing in young people to "act" as shills makes you wonder if these developers ever tell the truth!

Commenter: Ruth Harber -- Riverwatch

Section:

Comment:

The enclosed copy of a San Diego Union-Tribune article dated 3/30/09 should be of interest to the California Regional Water Quality Board if and when it makes a decision regarding the safety of the proposed Gregory Canyon Landfill in North County.

As you can see, the new and widely used compact fluorescent light bulbs appear to be leaking mercury. These light bulbs are supposed to be recycled -not in the recycling bin provided to homeowners but they require special handling and are supposed to be deposited at hardware centers throughout the county.

May I suggest that most people do not know of these requirements. May I also suggest that most people will put these dangerous and leaky light bulbs in the trash which then goes to the landfill.

You are aware that the Gregory Canyon Landfill is too close to the San Luis Rey river. The proponent, Gregory Canyon. Ltd. has offered a double liner. It is my understanding that even the manufacturers of these liners do not guarantee that they will not leak . . . all liners leak at some point .• maybe not tomorrow but sometime. The mercury in the light bulbs will eventually seep into the San Luis Rey river requiring a gigantic clean-up of its waters -a Super Fund disaster.

You will remember that when you chaired the County Planning Commission, this same project was turned down by your Board.

I hope that when the Gregory Canyon Landfill project comes before Regional's Board, you and the other members will consider the dire consequences the Gregory Canyon Landfill will bring to our environment. Water today is more precious than any time in San Diego County's history. Please do not allow it to be contaminated with mercury!

Commenter: Ruth Harber -- Riverwatch

Section:**Comment:**

I am the Secretary-Treasurer of the environmental group RiverWatch and have fought for twenty years to keep the San Luis Rey watershed from industrial development that will pollute the river and the drinking water on which thousands of people in this part of North County depend on. I am hopeful that I do not have to convince your Board that this landfill project is dangerous to the wellbeing of the residents, farmers, Native American tribes and businesses along the San Luis Rey river.

In previous years, all opposition referred to many issues which were deemed to be unmitigable in the numerous Environmental Impact Reports published. We have now finally come to the issuance of waste discharge requirements which will no doubt clear the path for this dangerous project. This water issue is also "unmitigable" and I urge you to deny the permit.

The Regional Water Quality Control Board of our State has one primary duty - that is to keep our water safe - in this case, to keep leachates from a garbage dump from filtering into the

groundwater. The promoters of this dump give you many guarantees that their liner(s) will not leak. May I remind you that even the manufacturers of these liners do not guarantee that they will not leak at one time or another.

Your staff has no doubt researched the project to the nth degree - many on staff are unhappy with the project - but they had a job to do. Now, your job is to consider not only their research but the huge public, organizations and local government opposition and to listen to the voice of experts who have nothing to gain by opposing this project except clean water.

In these times of drought - with supplies dwindling from year to year, it just doesn't make sense to allow a dump at the edge of a river which is the source of potable water for thousands of individuals. It is the duty of the Regional Water Quality Control Board to deny this pollution of the San Luis Rey river.

Thank you for taking my views into consideration.

Commenter: Ruth Harber -- Riverwatch

Section:

Comment:

Some people will go to any lengths, do anything, to win. Case in point: At the April 29, 2009 meeting where the Regional Quality Control Water Board staff heard comments from the public, two dozen or so high school kids 16 and 17 years old, were wearing a yellow sticker "I support the Gregory Canyon Landfill". Most of the participants in this workshop were vocal opponents of this trash dump -- some for as long as twenty years. I have spent twenty years fighting this dump.

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As I said, some people will go to any lengths to win! That is so pathetic!

Bringing in young people to "act" as shells makes you wonder if these developers ever tell the truth!

Commenter: Sean Harvey -- Private Individual

Section:

Comment:

I am opposed to the Gregory Canyon Landfill. The water I drink is extracted from the San Luis Rey River Basin, and I know there are plans to expand the extraction of more groundwater. All landfills eventually leak, and it may not be in my lifetime, but sometime down the road, the contaminated water will enter the groundwater. Not a question of if, but when. We should be concentrating on reducing our waste production first and where to store it second. With that said, I think you could find a better place to store it then so close to the aquifers in the area. Thank you for your time and consideration.

Commenter: Lesa Heebner -- City of Solana Beach

Section:

Comment:

Following is a copy of Resolution 2009-043 of our City Council regarding the proposed project to locate a landfill at Gregory Canyon. This is being sent on behalf of Councilwoman Heebner in confirmation of Council's continued opposition to the siting of the proposed landfill at Gregory Canyon and associated concerns regarding regional water quality issues.

The City of Solana Beach strongly opposes any future landfill sites that will jeopardize the San Luis Rey watershed and urges all those involved to seek alternate sites as a means for the collection and disposal of solid waste generated in North County San Diego.

Commenter: Mary Hicklin -- Private Individual

Section:

Comment:

I am opposed to Tentative Order No. R9-2009-004 Waste Discharge Requirements for the Gregory Canyon Ltd. Gregory Canyon Landfill, San Diego County. It appears to me that it poses an unacceptable risk to precious natural water resources and habitats. Perhaps you are aware that San Diego is already under mandatory water use restrictions because California's water resources are drying up. People say it is a "judicial drought" but this ignores the fact that all living creatures need water. We cannot continue to ignore the needs of other species while wasting our precious water on inappropriate agriculture and the rest. Even if we didn't need our water resources so desperately, this project would still be unacceptable because of its almost certain catastrophic contamination of surrounding aquifers as the dump site liner degrades over time. This is a bad proposal, one opposed by the San Diego chapter of the Sierra Club for 20 years.

We have ruined so many of our precious natural resources, caving in to short term expediency and corporate interests. Won't you please take a stand for our Mother Earth, for our children and grandchildren? Leave them some unpolluted water somewhere!
Please oppose this bad idea!

Commenter: Lisa Hildabrand -- Carlsbad Municipal Water District

Section:

Comment:

I am writing on behalf of the Carlsbad Municipal Water District (CMWD) Board of Directors concerning the issuance of a Gregory Canyon Landfill Waste Discharge Permit. At the July 7, 2009 CMWD Board meeting, the Board of Directors unanimously adopted a resolution opposing the siting of the Gregory Canyon Landfill project immediately adjacent to the San Luis Rey River and the issuance of a waste discharge permit for the project by the Regional Water Quality Control Board.

The Carlsbad Municipal Water District (CMWD) is a water rights holder within the San Luis Rey River Aquifer (SLRRA). These water rights can be used for the production and eventual consumption of potable drinking water in the CMWD service area. Although CMWD does not currently utilize this source as part of the annual water supply, it is being considered as a future supply source and/or as a lease revenue source. CMWD staff is discussing the possibility of leasing these water rights to a local San Diego County water agency.

Whether CMWD utilizes this source for its water supply (now or in the future) or leases the rights to another agency, CMWD has concerns regarding the effect the proposed Gregory Canyon Landfill will have on the District's ability to use this water source or lease the rights because of contamination from landfill leachate or improperly controlled surface run off. The District is also concerned the project may impact the District's ability to exercise its water rights.

In addition, the river and corresponding aquifer are the source for drinking water for thousands of San Diego County residents. The CMWD Board of Directors is concerned with the potential impacts the landfill could have on this important municipal water supply and do not agree with landfills being placed next to an active river or tributary to an aquifer. If the landfill is approved and the liner fails, and most believe that it is only a matter of time, the resulting contamination will destroy the aquifer for generations.

For the reasons noted above, the Carlsbad Municipal Water District Board of Directors opposes the siting of the landfill and the issuance of a waste discharge permit for the Gregory Canyon Landfill project.

Commenter: Jerry Hughes -- Private Individual

Section:

Comment:

Please, please do not adopt the Tentative Order for the Gregory Canyon Landfill. When you look over the Order very closely you will come to the conclusion that this process is very flawed and *WILL*, in time, affect our health and harm our environment.

Commenter: Otto Hunt -- Private Individual

Section:

Comment:

Why are we endangering our ground water?

Commenter: Jesse Hutchings -- Upper San Luis Rey Resource Conservation District

Section:

Comment:

The landfill liner will eventually leak and permanently impact the water quality of the San Luis River basin.

Commenter: Kevin Jeffries -- Assembly California Legislature

Section:

Comment:

I am writing to share my concern with your board as it considers permitting requirements for the Gregory Canyon Landfill within my district in northern San Diego County.

My most urgent concern is the possibility of a disastrous leak of landfill waste into the aquifer that supplies water to thousands of San Diego County residents.

In your tentative waste discharge requirements order, you note that landfill waste products "present a significant threat to water quality in the San Luis Rey River watershed." The tentative order requires the landfill operator to prepare a replacement water contingency plan for all parties whose water supply would be affected by a leak of garbage wastes into the aquifer. Such a leak could have disastrous consequences for thousands of people.

For this reason, the permit for the landfill should be delayed until such time as a viable and realistic water contingency plan is fully developed and you are able to make a fully informed decision.

Commenter: Ellen Jordan -- Private Individual

Section:

Comment:

Are you aware that this coastal canyon may well be home to the California gnatcatcher, an endangered species? This bird's habitat is protected because of the birds inability to move to other locations. You may not fill in this canyon if it is home to the CA gnatcatcher legally. I'd suggest that you do extensive surveys before attempting passage of this permit.

Furthermore, this coastal canyon may well be home to the California Gnatcatcher, an endangered species whose habitat is protected.

Commenter: Jean Kaiwi -- Private Individual

Section:

Comment:

Landfills will eventually leak the toxic leachate because the liner is made of plastic (HDPE, high density polyethylene). The plastic liner being exposed over time to the toxic chemicals in the leachate and pressure of the overlying solid wastes will develop stress cracks and fail. <http://www.waterconservationsummit.com/2009Presentations.html>

Commenter: Jean Kaiwi -- Private Individual

Section:

Comment:

The landfill is located over fractured rock. The toxic leachate will travel through the cracks, the path of least resistance, which lacks the natural filtering of soil. As the Staff report notes, predicting the direction of the flow of liquids in fractured rock with any confidence is not possible. This means that locating monitoring wells in the vicinity of the land fill that reliably test the water quality is not possible.

Commenter: Jean Kaiwi -- Private Individual

Section:

Comment:

Furthermore, the project will emit unacceptable levels of methane, a greenhouse gas plus other toxic gas emissions. The Gregory Canyon Landfill if approved will continue the now discouraged and soon-to-be obsolete practice to accept compostable solid waste compostable (organic matter), the source of methane gas. In fact it proposes to use green wastes as an alternative daily cover. The California Integrated Waste Management Board June 18, 2009 press release reports on their program to divert organic wastes from landfills and use it for biogas energy generation to reduce greenhouse gas emission from landfills. The Sierra Club

also supports diversion of organic matter from land fills to minimize the generation of methane gas. Studies have shown that landfill gas collection systems are not effective to limit gas emissions to acceptable levels. The Joint Technical Document fails to address the health effects of toxic gas emission to persons residing and/or working within a 2 mile radius of the landfill.

Commenter: Jean Kaiwi -- Private Individual

Section:

Comment:

The Joint Technical Document (JTD) uses outdated information to estimate the composition of the chemicals of concern. Waste discharge reports from local landfills have not been consulted for more current and reflect regional municipal solid waste composition. The JTD fails to recognize the increasing use of batteries, compact fluorescent lamps as well as conventional fluorescent tubes, which contain mercury, are discarded at end of life and get into the landfill due to ineffective hazardous matter collection systems. Municipal landfill studies show measurable mercury in the leachate and gas emissions via the landfill working face and the buried solid wastes posing environmental and human health risks.

Commenter: Jean Kaiwi -- Private Individual

Section:

Comment:

Mitigation of a leak is questionable at best. To mitigate the leaks that contaminate the groundwater, the project proposes to filter the contaminated groundwater. As it is not possible to predict the direction, and multiple paths of the leachate leaks, it is very questionable that the filtering mitigation to restore water quality will be effective to protect human health.

Commenter: Jean Kaiwi -- Private Individual

Section:

Comment:

The water replacement plan will be impossible to implement. It assumes that replacement water will be available and the landfill owner will have the resources to deliver it.

Commenter: Brian Katz -- Private Individual

Section:

Comment:

Unfortunately, history shows, with regards to projects in sensitive environmental areas, that statements of assurance from the developers often do not match the reality of the affects, by the time it is too late. It is naive to think this project would be any different. We should be looking at science and engineering here to make our decisions.

Commenter: Andrew Kean -- Private Individual

Section:

Comment:

I am concerned the proposed landfill is adjacent to the San Luis Rey River and located over a valuable and irreplaceable aquifer. The aquifer supplies irrigation and domestic water wells, the River provides water for the City of Oceanside's water recycling plant and we may desire to use this aquifer in the future in ways not currently anticipated.

Commenter: Eva Kerckhove -- Private Individual

Section:

Comment:

I am writing you today to oppose the Gregory Canyon Landfill for many reasons. The strongest reason I oppose the landfill is it will be built on top of water aquifers. If and when the liners leak, the aquifers would be contaminated with dangerous, toxic chemicals that can cause reproductive harm and physical ailments to people who consume the water. Our water supply is very scare in Southern California, and if the landfill permeates the aquifers with hazardous, toxic chemicals we won't have a fresh, clean source of water for the residents of San Diego County.

Please, deny the construction of Gregory Canyon.

Commenter: Ed Kimura -- Sierra Club

Section:

Comment:

A phased construction of landfill is planned with each phase consisting of excavation and site preparation. Because blasting is necessary to excavate rock, will the shock from the blasting cause damage to the engineered composite liners of the preceding completed landfill modules?

What special tests will be conducted to assure the integrity of the completed modules?

Commenter: Ed Kimura -- Sierra Club

Section:

Comment:

The draft Staff Technical Report notes that a reverse osmosis treatment may be required to treat the recycled water. The required supply of recycled water is 193 acre-ft/year or 172,300 gallons/day. Taking into consideration the recovery ratio (on the order of 85%) of the RO system this requires over 200,000 gpd capacity of the yet to be designed RO system and provisions to dispose of the brine. Designing and building this facility is not a small task. Will staff address this issue and the availability of recycled water before the August 12, 2009 hearing?

Commenter: Ed Kimura -- Sierra Club

Section:

Comment:

The draft Staff Technical Report does not mention the availability of recycled water for the landfill operation. What is the status of this issue?

Commenter: Ed Kimura -- Sierra Club

Section:

Comment:

The JTD and the draft Staff Technical Report do not mention monitoring for pathogens will be in the municipal waste stream contained in sources such as the sewage sludge and pet wastes. Despite this fact there appears to be no monitoring requirements for pathogens (at the very least indicator coliform) in the surface and monitoring wells. Why aren't pathogens monitored? Furthermore, household wastes and sewage sludge will contain emerging contaminants of concern present in personal care pharmaceuticals. These emerging contaminants should be monitored as well.

Commenter: Ed Kimura -- Sierra Club

Section:

Comment:

Issue 1. The proposed landfill containment system poses an unacceptable risk to the irreplaceable groundwater resources located within its watershed because the containment system will eventually fail and discharge toxic leachate and contaminate the groundwater. The containment system consists of a double composite liner placed in the excavated landfill pit site to contain toxic fluids (leachate) from leaking into the surrounding groundwater. In addition to the liner, a leachate collection and removal system is necessary to prevent excessive leachate accumulation within landfill. Failure of either the liner or leachate collection system can cause leachate leaks into the groundwater.

1.a Water and Water Related Resources within the Vicinity of the Gregory Canyon Landfill 3 (3 JTD Vol.1 Part D Table 12B)

A. Aquifers:

Name (AFY) *	Estimated Sustainable Yield in acre-ft/year
Bonsall Basin	5400
Pala Basin	2500
Pala/Pauma Basins	8000
	Total 15,900

*without groundwater management

B. San Luis Rey River Basin

Over 25 wells within 1 mile of the project providing water for industrial, agricultural and domestic use⁴ (4 This is a rough estimate. The JTD Part D Table 12D states this information is confidential)

Lower San Luis River Basin. Oceanside extracts 2,200 AFY from Mission Basin with plans to expand to provide additional 4,900 AFY for potable water supply

C. Bonsall Basin

Rainbow Municipal Water District is evaluating development of 3,000 AFY for potable water supply

D. Pauma Basin

Yuima Municipal Water District is pumping up to 2,700 AFY

E. San Luis Rey River riparian habitat and Park Master Plan

1.b. The Joint Technical Document Volume 1 Part B description of waste types is not adequate to assess their toxic effects on the leachate, landfill gas, and corrosive effects on the double composite liner and leachate collection and recovery system (LCRS). The JTD Table 4 Volume 1 Part B.1.5.4 uses the waste composition based on several landfills throughout California. It is not clear why the JTD did not use more detailed waste composition of a local landfill such as the City San Diego Miramar land shown in the County of San Diego Integrated Waste Management Plan. (C IWMP-1).

1.c. The JTD description of the typical leachate composition (Vol. Part B, page B.1-8 Table 3A Gregory Canyon Landfill Typical Leachate Composition.) is based on 1993 report, 16 years old. The data must be questioned because the chemical constituents in solid wastes change with time. It is notable that JTD did not obtain up-to-date waste discharge leachate monitoring reports from local landfills. The solid waste will likely contain new chemical compounds with harmful effects on the vital components in the LCRS. Consequently, relying only on Table 3A typical leachate to estimate the leachate chemical composition over the 30 year life of a landfill is highly problematical making it difficult to predict the long-term durability/reliability of the landfill containment components: the liners and leachate collection and removal systems.

1.d. The JTD design of the proposed primary leachate collection and removal, LRCS, is not complete (Part C Vol. 1 Part C.2.5.4). The secondary leachate collection system design details are absent in the JTD Part C. (Note error in Draft Technical Report5)(5 Page 19 Secondary Leachate Collection and Recovery System refer to Part C page C.2-7, which is erroneous as Part C does not mention the SLRCS.). The LRCS must reliably operate during and after landfill closure and therefore, it is as vital to assuring landfill integrity as the composite liner system (Montague). Reinhart and Chopra describe the critical issues in design, construction and operation of leachate collection systems (Reinhart). Assessing the long-term performance consideration of geotextile nets used in the leachate collection system is important (Narejo). The JTD failure to address this issue and the lack of design details is not acceptable.

1.e. List of contaminants of concern in the municipal solid waste is not adequate. The JTD fails to address emerging contaminants of concern. These include pharmaceuticals and personal care products and nanomaterials or nanoparticles. See the presentations by Hemmett (Hemmett) and report by Motzer (Motzer) for information on these emerging contaminants of concern. Pathogens are not addressed. The landfill accepts sewage sludge and other sources containing human and animal pathogen. The JTD does not address mercury in the solid waste deposits. Sources of mercury include electric switches, batteries, thermometers, barometers, and compact fluorescent lamps. Landfills convert metallic mercury into it a more toxic form, methyl mercury, and is emitted in landfill gas and in the leachate (Raloff). The Northeast Waste Management Officials' Association has mercury reduction program (NEWMOA-hg). A summary of their mercury research on mercury emissions from landfills is available on line (NEWMOA-2003).

1.f. It is important to recognize that landfill is lined by two types; the liner for the bottom and the other for the side slopes. These composite liners are constructed at the site, layer by layer. The bottom liner has 13 separate layers while the side slope has 6 layers. It is not a trivial task to properly construct the liners. Despite the quality assurance provisions for all the materials and on site inspection including the electrical leak location test after the liners are constructed, there is a finite risk (probability) that latent defects exist and cause a failure at some time after the landfill is in operation. By far the most damage caused in the liner is by human error (Peggs, Ian D).

1.g The National Research Council report Assessment of the Performance of Engineered Waste Containment Barriers (NRC) notes that very few observational data exist on landfill barrier systems including liners and none of the data extend beyond 30 years. Consequently, long-term performance relies on extrapolations of relatively short-term data and assumptions based on the long-term performance of the barrier systems components.

Issue 1.Conclusion. For the reasons described in items 1.b to 1.g, the Gregory Canyon Landfill poses an unacceptable risk of a failure that discharges toxic leachate into and contaminating the irreplaceable water resources.

Commenter: Ed Kimura -- Sierra Club

Section:

Comment:

The Sierra Club respectfully submits these comments explaining our strong opposition to the adoption of the Tentative Order R9-2009-004 Waste Discharge Requirements for the Gregory Canyon Ltd, Gregory Canyon Landfill. The proposed landfill is located on a fractured bedrock aquifer system that provides groundwater to municipal water districts and privately owned wells for domestic, industrial, and agricultural use. Until just a few years ago, almost all of San Diego County's water supply was imported from the Colorado River and the Bay Delta.

Protecting the

groundwater sources here in this region and nationwide has not been given the attention it needs; a valuable resource. Now that the imported supplies have been significantly cut back by the drought and mandated reductions in the Bay-Delta water local water official are looking at the local

groundwater resources to help offset the water deficits¹ (1 Lau, Angela, Going to the Well, San Diego Union Tribune, July 5, 2009

<http://www3.signonsandiego.com/stories/2009/jul/05/1m5ground213211-going-well/?uniontrib>).

The Groundwater Protection Council² (2

The Ground Water Protection Council is a national association of state ground water and underground injection control agencies whose mission is to promote the protection and conservation of ground water resources for all beneficial uses, recognizing ground water as a critical component of the ecosystem. http://www.gwpc.org/about_us/about_us.htm) in November 2007 released their Groundwater Report to the Nation: A Call to Action (Groundwater Protection Council). A short passage in this report indicates the importance of protecting groundwater resources.

All drinking water sources, both public and private, are vulnerable to contamination from an array of human activities such as septic system discharges, waste-site releases, underground storage system leaks, nonpoint-source pollution, and agricultural chemicals. Without diligent attention to managing these potential sources of contamination, our drinking water will come at a higher cost over time. This cost includes the increasing need for water treatment, monitoring, remediation, finding alternate water supplies, providing bottled water, consultants, staff time, and litigation. Source water protection is simpler, less expensive, and more reliable over the long term.

Summary. The review of the Tentative Order R9-2009-004 Waste Discharge Requirements and related documents for the Gregory Canyon Ltd, Gregory Canyon Landfill included consulting the technical literature to obtain a general understanding of the site selection and design of landfills.

The review has shown serious flaws in Tentative Order and the Joint Technical Document (JTD). Locating the landfill on the fractured rock aquifer is reason enough to reject the adoption of the Tentative Order because the complex nature of its hydrology makes it impossible for practical

reasons to implement a monitoring system that reliably and accurately detect and quantify discharges into the surrounding aquifers and the surface waters of the San Luis Rey River. The JTD has not provided adequate information indicating a lack of attention to details that are so critical to the design and construction of the landfill. The cited NRC report has found that there are only extrapolations of existing data to predict the on the long-term reliability of a landfill. These questionable factors lead us to conclude that landfill double composite system will fail. Finally, the

Tentative Order to include the two mitigation measures, the Contingency Water Treatment System and the Replacement Water Contingency Plan, both of which are fatally flawed. They are intended to protect the viability of the Gregory Canyon Landfill instead of protecting water quality of the natural water resources in the watershed.

For these reasons we respectfully urge you to reject the Tentative Order R9-2009-004 for the proposed Gregory Canyon Landfill because it poses an unacceptable risk to the valuable, irreplaceable natural water resources.

Commenter: Ed Kimura -- Sierra Club

Section:

Comment:

Issue 2. Landfill situated on fractured bedrock aquifer is not acceptable. The proposed landfill is in Gregory Canyon. The site will be excavated exposing a fractured bedrock base to provide the required volume to contain the solid waste deposits. With increasing demand for water, communities are turning to fractured rock aquifers. In response the United States Geological Survey, USGS, has a research program devoted to gain an understanding and to characterize groundwater flow conditions in fractured rock aquifers necessary to make cost-effective and sound decisions in groundwater management. The hydrology of fractured rock is extremely complex. Research has found that no method can unambiguously map fractures and their capacity for fluid movement (USGS-1). Contaminant fate and transport is fundamentally different in fractured rock than in sand and gravel aquifers (USGS-2). A California study also has found how complex it is to characterize fractured rock aquifers (Evans and Borchers). The Draft Technical Report describes the basis for Findings 6, 17 and 19. All are related to the hydrogeology of the site. The key findings are:

The bedrock geology is a complex of fractures, joints and dikes.

The deepest aquifer underneath the landfill footprint is an unweathered fractured bedrock aquifer

Groundwater flow in fractured bedrock is directed by the fractures.

The complex nature of the fractured rock aquifer makes it extremely difficult to predict with confidence the direction and volume of groundwater flow.

The permeable fractures that transmit high volumes of groundwater may be widely spaced and may not intersect the detection monitoring well system.

The unpredictability of fracture location and groundwater flows means groundwater monitoring system cannot accurately test water quality.

The requirement for the Replacement Water Contingency Plan are based on a), the complex hydrology of the fracture rock aquifer makes discharges of pollutants difficult to detect, delineate, and remediate in a short period of time and b), the JTD the aquifer pumping tests to characterize the aquifer did not satisfy the minimum conditions recommended in the literature.

The County of San Diego Integrated Waste Management Plan, Citing Element states (CIWMP-2):

Criterion No.1- Groundwater and Aquifers

The purpose of this criterion is to protect groundwater resources in the state. Alluvial aquifers and fractured rock aquifers are particularly sensitive to degradation; therefore, proposed sites which include these features are considered less desirable than sites without them.

Issue 2. Conclusion. The complex hydrology of fractured bedrock means that accurate groundwater monitoring to test for WDR compliance is not possible. As a measure of last resort, the WDR has included the Replacement Water Contingency Plan. All of which plus the County citing element leads us to conclude that the Gregory Canyon landfill site selection is not acceptable.

Commenter: Ed Kimura -- Sierra Club

Section:

Comment:

The draft Staff Technical Report provides on citations; for example as Huntley (1993b) but without a specific list of references. Please provide the references cited in the text of the Staff Report.

Commenter: Ed Kimura -- Sierra Club

Section:

Comment:

The geology of the area on which the landfill is to be placed consists of excavated fractured rock.

The excavation includes blasting. Will the additional bore wells be drilled in the excavated areas

to determine changes in the hydrology? What load bearing analyses have been conducted on fractured rock before and after excavation? What analyses have been conducted on subsidence

of the excavated area over time? Has any analyses been conducted to determine differential subsidence and consequent failure (leakage) of the composite liners, bottom and slope?

Commenter: Ed Kimura -- Sierra Club

Section: Finding Nos. 14 and 19

Comment:

Issue 3. The two methods in the draft WDR (Findings 14 and 19) to mitigate the release of toxic leachate into the groundwater are not feasible; namely, 1) Contingency Water Treatment System, 2), Replacement Water Contingency Plan meeting drinking water quality standards to the public and private well owners and other parties affected by the release of wastes and waste constituents. The JTD, Vol.1 B.5.18, description on water treatment system using RO filtering states the purpose is to provide groundwater treatment "in the event groundwater impacts are identified." Where to monitor the groundwater and where to extract the contaminate groundwater for treatment are not explained. Given the complexities of the

fractured rock aquifer and the limitations on monitoring it is not possible to reliably detect all the well locations needing treatment. For this reason, this mitigation measure is bound to fail. The Water Replacement Contingency Plan Finding 19 in the Tentative WDR is not tenable. Adopting the WDR places higher importance on a landfill than protecting the water quality of the irreplaceable water resource. It ignores the cutbacks in the imported water supplies and the need to maximize the local water resources. It assumes that at some indefinite time in the future when the landfill containment systems fail and discharge toxic matter into the aquifer and surface waters, that the replacement water would be available and delivered to all owners of wells and others affected by wastes and waste constituents discharged from the landfill. To sacrifice the irreplaceable water resource for this landfill does not make sense. The simple and least cost solution is to protect water quality of this irreplaceable water resource is to eliminate the source of pollution by not adopting the Gregory Canyon Waste Discharge Requirement.

Commenter: Ed Kimura -- Sierra Club

Section: Page 24, Staff Technical Report

Comment:

Page 24 of the draft Staff Technical Report, under Finding 18, requires the Discharger to provide the Regional Board with a workplan to enhance and improve the surface water monitoring plan to comply with the applicable performance requirements for the surface water Detection

Monitoring Program. Will the discharger provide this workplan for public comment prior the August 12, 2009 public hearing on the tentative WDR?

Commenter: Victoria Kozak -- Private Individual

Section:

Comment:

Protect our water quality and supplies, NO to the landfill, do not issue the permit.

Commenter: Lenore Lamb -- Pala Band of Mission Indians

Section:

Comment:

We oppose the landfill because it will be permanent and will remain a threat to water supplies for hundreds of years, long after the owners and operators and their financial assurances for impacts from the proposed landfill are gone.

I'd also like to pose the question: What type of oversight will there be for compliance with the WDRs both during construction and during operation? We've heard many assurances being made in the past, specifically at Las Pulgas Landfill, and we'd like to know how the Board plans on assuring these things.

Who will do the full-time observation promised by Gregory Canyon?
What are the consequences of non-compliance for these issues?
What happens if the WDRs aren't followed?

Commenter: Lenore Lamb -- Pala Band of Mission Indians

Section:

Comment:

How do you address the current studies that are currently being looked at in the San Luis Rey aquifer to use it as a storage basin?

Commenter: Lenore Lamb -- Pala Band of Mission Indians

Section:

Comment:

How long will the insurance be valid for? If the liner leaks after the landfill closes or after the insurance expires, who will be responsible for paying for the cleanup?

Commenter: Lenore Lamb -- Pala Band of Mission Indians

Section:

Comment:

Gregory Canyon has stated that water will need to be collected and stored so that it will not leave the site.

How much precious water will be wasted from the aquifer because it's being collected and stored by Gregory Canyon so that it won't leave the site?

How will downstream users be affected by this, and by the contaminated water that will be allowed to percolate back into our drinking water?

Commenter: Lenore Lamb -- Pala Band of Mission Indians

Section:

Comment:

How will earthquakes be planned for? There is only a brief discussion in the joint technical document, which barely skims the surface of what can happen.

Commenter: Donald Lee -- Private Individual

Section:

Comment:

Please oppose Tentative Order No. R9-2009-004 Waste Discharge Requirements for Gregory Canyon Landfill, because it will eventually leak and contaminate San Luis Rey River water resources. Thank you.

Commenter: Claude Lewis -- San Diego County Water Authority

Section:**Comment:**

The Water Authority remains concerned that future leakage from the landfill could adversely impact vitally important groundwater supplies in the San Luis Rey River Valley aquifers. The Gregory Canyon Landfill Project directly affects the water supply for several agencies that are members of the San Diego County Water Authority and potentially affects all the water agencies and all the residents in the County. This aquifer is not only providing many existing citizens in our region a dependable water supply but has great potential in the future for storing and providing additional water supplies.

The Water Authority urges the Regional Board to carefully and closely evaluate any conditions necessary to address the negative water quality impacts that could occur to regional drinking water supplies from landfill leakage when considering the issuance of Waste Discharge Requirements for the project.

Commenter: Mark Lofton -- La Jolla Band of Luiseno Indians

Section:**Comment:**

The landfill is proposed to be constructed near to the San Diego County Aqueduct which is the only critical link that San Diego County has to imported water that the region relies upon for potable use. The landfill proponents originally stated that they would pay for relocation of the aqueduct but have now retracted that decision and blasting that would occur during construction has a strong possibility of causing damage to the aqueduct pipeline. The heavy vehicles required for construction will be crossing access routes over the pipeline and normal truck traffic onto the landfill site would also cross the pipelines and plans for temporary crossings or permanent encasement of the pipelines have not been provided. The landfill applicant has not met the mitigation requirements of the final EIR.

Commenter: Mark Lofton -- La Jolla Band of Luiseno Indians

Section:

Comment:

The landfill is proposed to be constructed six miles from the Lake Elsinore Fault, a branch of the Alquist-Priolo Earthquake Fault. An earthquake along this fault-line could cause ground shifting that would rupture the liner and leak wastes from the landfill into the San Luis Rey River and/or the underground aquifer.

Commenter: Mark Lofton -- La Jolla Band of Luiseno Indians

Section:**Comment:**

The proposed site would also be detrimental to a nearby sacred site with great cultural and historical significance for the local Luiseno Native American Tribes. These reasons listed above show, as well as many others, that the proposed landfill site poses unacceptable risks to the water supply for both local residents and the entire San Diego County region. The La Jolla Band of Luiseno Indians requests that the Regional Water Quality Control Board fulfill its obligation to protect the region's water quality by denying the permit required for construction.

Commenter: Mark Lofton -- La Jolla Band of Luiseno Indians

Section:**Comment:**

The landfill is proposed to be constructed directly above a critical underground water aquifer. The Pala Tribe, nearby water districts, and many local residents rely on this aquifer as their primary or only supply of potable drinking water. Additionally the San Luis Rey River provides a drinking water supply to the City of Oceanside and many other residents downstream of the proposed landfill site. Any contamination of the river, whether from landfill leachate, landfill waste hauling truck accidents as they cross the river, or other pollution spills would jeopardize that drinking water supply.

Commenter: Mark Lofton -- La Jolla Band of Luiseno Indians

Section:**Comment:**

The Olivenhain Water District has decided to not provide the water supply required to construct and operate the landfill. Without a guaranteed supply of water the project should not be permitted.

Commenter: Mark Lofton -- La Jolla Band of Luiseno Indians

Section:

Comment:

The standards outlined in the California Code of Regulations, Title 27, Division 2, Subdivision 1, Chapter 3, Subchapter 2, Article 3, give very . specific siting requirements that are not adequately addressed by the proposed location of the Gregory Canyon landfill. Section 20260 of the above referenced code, SWRCB -- Class III: Landfills for Nonhazardous Waste, specifies that MSW landfills "shall be sited where soil characteristics, distance from waste to groundwater, and other factors will ensure no impairment of beneficial uses of surface water or groundwater beneath or adjacent to the landfill". Section (c) specifies that a landfill shall be "designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return period". This location cannot assure that this will not happen. Section (d) specifies not siting landfills on a known Holocene fault and the proximity of this site to the Lake Elsinore fault is cause for great concern.

Commenter: Mark Lofton -- La Jolla Band of Luiseno Indians**Section:****Comment:**

The landfill is proposed to be constructed within the 100-year floodplain of the San Luis Rey River which has flooded in the past and completely obliterated the proposed site location.

Commenter: Mark Lofton -- La Jolla Band of Luiseno Indians**Section:****Comment:**

The La Jolla Band of Luiseno Indians is strongly opposed to the permitting and construction of the proposed Gregory Canyon landfill near Pala. The Gregory Canyon site is without question the wrong location to place a landfill.

One of the greatest needs in this dry region is to protect water quality and supply and this project poses an unreasonable risk to that water supply. A previous report issued by the RWQCB states that the landfill wastes would "present a significant threat to water quality in the San Luis Rey River". While there are opinions on both sides of the question about whether the liner could leak the landfill should be placed at a site where any leakage would not pose the risk to water quality that would exist at this site. Local water districts are also in strong opposition to the proposed landfill site.

Commenter: Mark Lofton -- La Jolla Band of Luiseno Indians**Section:****Comment:**

Landfill liners can fail and often do. If the liner on this landfill were to fail the resultant release of landfill leachate would cause contamination to the underground aquifer and the San Luis Rey River. While there are differing opinions on the reliability of the landfill liner this presents an unacceptable risk.

Commenter: Jedda Lorek -- Private Individual

Section:

Comment:

The mission of the Ground Water Basins Branch is to ensure timely and effective regional compliance with requirements for investigation, cleanup and abatement of ground water pollution caused by unauthorized releases of hazardous substances from storage and conveyance systems, discharges of solid and liquid wastes to land, and effective regulation of discharges of recycled/reclaimed wastewater; thereby supporting the mission of the San Diego Regional Water Quality Control Board. Perhaps the various regulatory agencies would not have to spend precious funds and resources cleaning up our water ways if more thought went into the location of authorized landfills. That a water regulatory agency might approve the Gregory Canyon landfill over the San Luis Rey River is inconceivable.

Commenter: Martha Lujan -- Private Individual

Section:

Comment:

I've been privileged to participate as an invited guest in some of the sacred rituals of the Pala Band of Mission Indians and have visited the proposed site of this landfill. As much as landfills may be needed to dispose of all of our man made junk, the Native Americans living in this land have a priority right to live in this area populated and made sacred by their ancestors. My family is interred at Calvary Cemetery in Los Angeles and at Resurrection Cemetery in San Gabriel, California. I would hate to have my ancestors covered up by a landfill and I'm sure you would not like this to happen to your family either.

Commenter: Linda Lyerly -- Private Individual

Section:

Comment:

Even though the voters voted for another landfill no one was aware that this would impact the San Luis Rey River and that it was on sacred ground. Please deny this project which has become such a mighty thorn in the County's side.

Commenter: Rita Massey -- Private Individual

Section:

Comment:

Please do not accept this order to allow Gregory Canyon landfill. Please protect and preserve the aquifers of North County!

Commenter: Bo Mazzetti -- Rincon Band of Luiseno Indians

Section:

Comment:

As Tribal Chairman for the Rincon Band of Luiseno Indians, I am writing this letter in opposition of the proposed Gregory Canyon Landfill.

The Rincon Band of Luiseno Indians considers the risks associated with the proposed Gregory Canyon Landfill significant and cannot support the project. The proposed site will have an effect on several adjacent water-related features including two major San Diego County Water Authority pipelines, the San Luis Rey watershed, and the underlying bedrock aquifer. Though waste disposal is limited to non-hazardous wastes, municipal solid wastes (MSW) and their degradation products present such a threat to the San Luis Rey Watershed that project development should not proceed.

Though RWQCB has identified appropriate measures to ensure the protection and monitoring of water resources, the Rincon Band believes the health and environmental risks outweigh the economic benefits of the proposed development. Despite ongoing water monitoring and the replacement water contingency plan, water is too valuable a resource to place at risk and should be protected even at great costs.

The underlying bedrock aquifer may qualify as a 'sole source aquifer' for the Pala Basin, further emphasizing the importance of ensuring water quality safety.

The Rincon Band also considers the cultural and historical importance of Gregory Mountain and Medicine Rock too great to support the landfill development. The Revised Final Environmental Impact Report, issued March 2007, states: "from a subjective perspective, the impacts to [these sites] would be significant and unavoidable". The Rincon Band considers any impact to Gregory Mountain or Medicine Rock significant and unacceptable regardless of mitigation measures.

In consideration of adoption of tentative Waste Discharge Requirements (WDR) for the proposed Gregory Canyon Landfill, please consider the responsibility of the RWQCB to protect the area's waters.

Commenter: Michael Mellano -- Farm Bureau San Diego County

Section:

Comment:

Commenter: Michael Mellano -- Farm Bureau San Diego County

Section: Provision H.12

Comment:

For farmers in San Diego County there is no other issue that rises to match the need for a sustainable and reliable water supply. In order to maintain agriculture in our community no segment of the water supply portfolio can be put at risk. The Waste Discharge Requirements for

this project must not be issued without the assurance that landfill leakage will never compromise the supply of water provided by the San Luis Rey River Valley aquifers through the use of redundant protections. To assist in meeting that goal we believe the liner and leachate collection system should be augmented by an additional condition that requires sealing the fractures in the bedrock underlying the site.

Farmers in San Diego County have worked hard to establish their current position as the nation's twelfth largest farm economy among all counties in the nation. Much of that production is located within the San Luis Rey River Watershed where the growers depend on wells fed by the

San Luis Rey River or are patrons of the water districts that rely on that watershed. Farmers who are not in that area would be at risk as well should there be a loss of water supplies that would have to be replaced, thus reducing the region's overall water supply inventory.

Because current and future water supplies identified by the region's wholesale and retail water agencies and private well owners will be needed to meet projected demands, Condition H. 12, Replacement Water for Water Supply Wells, should be amended to state that the Water Replacement Contingency Plan cannot rely on any water supply already in use. The replacement water must only come from a new source or wellhead treatment systems.

It has been the position of the San Diego County Farm Bureau that the land use and environmental permitting authority for the Gregory Canyon Landfill should be with San Diego Serving San Diego County Agriculture Since 1913 County's Board of Supervisors. It is unfortunate that that authority has been wrested away. Because of this situation great responsibility lies with the Regional Water Quality Control Board to act within its authority to protect the public interest. Should you find that you are unable to apply conditions that sufficiently protect the waters of the San Luis Rey Valley aquifer or that there is any risk that the applicant will be unable to fulfill the conditions, it would be our position to oppose the issuance of the Waste Discharge Requirements.

Commenter: John Metzger -- Private Individual

Section:

Comment:

Our family has been Pauma Valley property owners for over 37 years and we are very concerned that the proposed landfill is adjacent to and above the San Luis Rey River and directly above a valuable and irreplaceable aquifer.

Due to the landfill's location on a mountainside of fractured rock, it is more than just likely that the landfill will leak --despite the pronouncements by non-local private investors of "Gregory Canyon, Ltd" (i.e., Marin County's Jerry Reisser, et al.) that their composite landfill liner would "never contaminate" our valuable resources. All one needs to do is look at other landfills where similar claims about liner strength were made by other proponents, with eventual disastrous results. The mitigation measure of filtering is not reliable. The central problem with Gregory Canyon is that the voters approved a landfill that happens to be on the worst possible location for a landfill. Of course, the particular geology, topography, and hydrology associated with their landfill were never provided by these non-local proponents to the voters of San Diego.

Commenter: Damon Nagami -- Natural Resources Defense Council

Section:

Comment:

On behalf of the Natural Resources Defense Council (NRDC) and its more than 1.2 million members and activists, over 250,000 of whom live in California, I am writing to express our strong opposition to the proposed Gregory Canyon Landfill and to urge you not to adopt the waste discharge requirements in the above-referenced Tentative Order. Gregory Canyon is part of a unique California ecosystem of chaparral and coastal sage scrub habitat and serves as home to several endangered and other important species. The Landfill would have devastating impacts on the environment, including the destruction of some of the last remaining unspoiled wildlands in the region and the desecration of several sacred Native American sites.

Because of the unacceptable risk the proposed Landfill poses to the region's precious drinking water sources, and the undeniable need to protect our water supplies in the face of an extensive drought and a changing climate, we respectfully urge the Regional Board not to adopt the waste discharge requirements in the above-referenced Tentative Order. We also urge the Board to extend the public comment deadline to allow the affected community and other interested stakeholders to continue to participate meaningfully in this process.

Commenter: Damon Nagami -- Natural Resources Defense Council

Section:

Comment:

The area surrounding Gregory Canyon also houses several important drinking water sources that serve thousands of residents and businesses throughout the region. There is a very real concern that toxic chemicals from the Landfill could leak into the fractured bedrock aquifers that lie beneath the banks of the San Luis Rey River, the aqueducts operated by the San Diego County Water Authority, and even the San Luis Rey River itself. Heavy rains, earthquakes, or a number of other factors could cause the Landfill's liner to break, which would result in irreversible harm to these critical water resources. For these reasons, the San Diego County Water Authority, a host of elected officials and other groups, and the Regional Board's own staff all have expressed grave concerns about the Landfill's potential to leak pollutants into the groundwater supplies.

Commenter: Damon Nagami -- Natural Resources Defense Council

Section:

Comment:

We are also troubled by the Regional Board's decision not to extend the public comment deadline on this matter, despite the fact that issues have arisen recently that will need to be addressed before any public hearing can proceed. As the Regional Board acknowledges in its June 26th letter, the proposed Landfill does not have a source of water, and significant CEQA issues regarding the Landfill still need to be resolved. As a result, the Regional Board has been forced to postpone the public hearing indefinitely. Nevertheless, the Board insists on closing the public comment period on July 12th as originally planned.

The Regional Board's refusal to extend the comment period is contrary to the letter and spirit of the public participation provisions of the Porter-Cologne Water Quality Control Act. See, e.g., Cal. Water Code §§ 13378 (requiring public notice and hearing prior to issuance of discharge requirements), 13292 (establishing internal review process to ensure "fair, timely, and equal access to all participants in regional board proceedings"). Indeed, the Regional Board's April 10, 2009 notice announcing the public comment period insists that Board "wishes to obtain public input on this matter" and that "[p]ublic participation is encouraged," which makes the Board's reluctance to extend the comment period that much more perplexing. This decision is unfair to the affected community and other interested members of the public, who will be shut out of the public participation process even though new information is certain to come to light as a new water source for the Landfill is sought and the project's proponents address the outstanding CEQA issues. This is unacceptable to the affected communities and all other stakeholders who are relying on the Regional Board to consider all relevant input on this project and make a truly informed decision.

Commenter: Pam Nelson -- Private Individual

Section:

Comment:

Dwindling water supply in Southern California makes this another important issue to be considered when accounting for our limited regional supplies. We cannot afford to contaminate our local groundwater with projects like this one.

Commenter: Travis Newhouse -- Private Individual

Section:

Comment:

San Diego County cannot afford to risk contaminating sources of clean water for its citizens.

Commenter: Nick Nordquist -- Private Individual

Section:

Comment:

The proposed Gregory Canyon Landfill is going to unacceptably endanger the San Luis Rey River and the valuable and irreplaceable San Luis Rey aquifer. In an era where local and regional water resources are becoming increasingly scarce, to put a potentially major local water source unnecessarily in jeopardy is highly irresponsible.

Given the geologic and environmental conditions, it would be hard to imagine a worse possible site for a landfill than Gregory Canyon.

While the aqueduct that supplies the City of San Diego could be relocated away from the landfill site, the aquifer that supplies domestic and irrigation water for numerous users up and down the watershed, including the City of Oceanside, can not be relocated or properly protected from this project.

Keep in mind the danger of leakage from this landfill is not just short term. Once the waste is put there it will continue to be a threat to the aquifer for several millennia. There are landfills in Europe from the era of the Roman Empire that are still discharging toxins after 2,000 years.

The mission of your board is to preserve and enhance the quality of California's water resources for the benefit of present and future generations of Californians. Adoption of the Tentative Order for the proposed Gregory Canyon Landfill project would run counter this mission and put valuable water resources unnecessarily in danger. I urge you to deny the Waste Discharge permit for this project on the grounds that the risks of the proposed location are unacceptable.

Commenter: Nick Nordquist -- Private Individual

Section:

Comment:

While the mitigation efforts of Gregory Canyon Ltd. are extensive and state of the art, they are insufficient. In spite of mitigation attempts, there has never been a single landfill in history that has successfully prevented leaks. Every landfill leaks, some catastrophically. This site is particularly dangerous because the fractured rock under the site could convey any leaking toxins directly into the underlying aquifer. If the Gregory Canyon Landfill leaks into SLR aquifer and/or watershed, the resulting pollution will do irreparable damage.

Commenter: Nick Nordquist -- Private Individual

Section:

Comment:

I would also like to bring to your attention that this site is within 1 mile of a major earthquake fault. In spite of Gregory Canyon Ltd. assurances to the contrary, there is no insurance policy that could possibly contend with the worst case scenario of a catastrophic failure. No insurance company could afford to bankroll the surely multi-billion dollar cleanup attempt. In the wake of such an occurrence, the ultimate liability for this private for-profit project would fall to the public sector. The public sector should not be in the business of insuring private for-profit projects.

Commenter: Charlene Orszag -- State of California Water Commission

Section:

Comment:

Due to the location on fractured rock, the landfill will leak in due time despite the composite landfill liner and will contaminate these valuable resources. The mitigation measure of filtering is not reliable. This site is not appropriate for a landfill.

Commenter: Robert Owen -- Private Individual

Section:

Comment:

I urge the RQWCB not to approve the Gregory Canyon Landfill because it will eventually leak, contaminating and ruining the precious natural water resources in the San Luis Rey River and many wells in the area. It makes no sense to sacrifice these natural water resources for the landfill.

I visit various parts of the San Luis Rey River with some frequency and wish to preserve/improve its current [albeit imperfect] condition. Let's not wreck it further!

Commenter: Victor Pankey -- San Luis Rey MWD

Section:

Comment:

The provision is that there be a minimum of five years of records maintained. I would think that there really is no reason that those records should not be maintained forever. Because in the event of a failure, those records that show how the structure was constructed, how it was maintained, are going to be extremely important in any kind of an evaluation as to why it failed. And five years doesn't go back very far when you're talking about a failure that may occur in 10 or 15 years from now.

Commenter: Victor Pankey -- San Luis Rey MWD

Section:

Comment:

On page 9, your paragraph 23 seems to provide that the funds can be made available to the Regional Board, funds that the discharger has failed or refuses to implement corrective actions in response to a reasonably foreseeable release. I would argue that "reasonably foreseeable" does not belong there. Those funds should be available for use if there is any release, whether it was reasonably foreseeable or not.

Speaking to H4, the District would ask that there be an inclusion of an automatic escalator to accommodate the increases in costs that are no doubt going to be coming down the road. Such things as maybe an index such as the Engineering News-Record or something relating to actual costs of reparations in the event of a failure should be included in the WDRs.

Furthermore, we're going to request that the level of financial assurances not be left up to the sole determination -- that is, the adjustment of these levels not be left to the sole determination of the discharger, but that the Regional Board remain in control or its successor agency remain in control of that decision making as to whether or not the amounts allocated are adequate.

Commenter: Victor Pankey -- San Luis Rey MWD

Section:**Comment:**

And onto the question of monitoring. The provision is that there be a minimum of five years of records maintained. I would think that there is really no reason that those records should not be maintained forever. Because in the event of a failure, those records as to how the structure was constructed, how it was maintained, are going to be extremely important in any kind of an evaluation as to why it failed. And five years doesn't go back very far when you're talking about a failure may occur in 10 or 15 years from now.

Commenter: Victor Pankey -- San Luis Rey MWD

Section:**Comment:**

There has been some talk about the replacement of water in the event of a failure, and I can only add our emphasis to the conclusion that 90 days is an awful long time to be without water when we have absolutely no other source of supply. As you are aware, those of us in the San Luis Rey Municipal Water District pump all of our water from the basin. We have no means of plugging into any kind of alternate water supply. And while it's true that any releases might move very slowly through the underground basin, they can move very rapidly on the surface. And in the event of a discharge into the surface waters, our water can be contaminated in a matter of hours.

Commenter: Victor Pankey -- San Luis Rey MWD

Section:

Comment:

There has been some talk about the replacement of water in the event of a failure, and I can only add our emphasis to the conclusion that 90 days is an awful long time to be without water when we have absolutely no other source of supply.

As you are aware, those of us in the San Luis Rey Municipal Water District pump all of our water from the basin. We have no means of plugging into any kind of alternate water supply.

So I would argue that that time period, at least for the portions for drinking water or for water that can be affected rapidly by any discharge, the time period to compensate or replace that water should be significantly shortened.

Commenter: Victor Pankey -- San Luis Rey MWD

Section: D.1 and D.2

Comment:

We would like to be added to the notification under paragraphs D.1 and D.2 in the event of release

Commenter: Victor Pankey -- San Luis Rey MWD

Section: Finding 23 and H.4

Comment:

Finding 23 seems to provide that the funds can be made available to the Regional Board, funds that the discharger has failed or refuses to implement corrective actions in response to a reasonably foreseeable release. I would argue that "reasonably foreseeable" doesn't belong there. Those funds should be available for use if there is any release, whether it was reasonably foreseeable or not.

The San Luis Rey MWD requests that there be an inclusion of an automatic escalator to accommodate the increases in costs that are no doubt going to be coming down the road. An index such as the Engineering News-Record or something relating to actual costs of reparations in the event of a failure should be included in the WDRs. We're going to request that the level of financial assurances not be left up to the sole determination of the discharger, but that the Regional Board remain in control or its successor agency remain in control of that decision making as to whether or not the amounts allocated are adequate.

Commenter: Victor Pankey -- San Luis Rey MWD

Section: G

Comment:

There is a provision for notification under Section G requiring - affecting releases beyond the facility boundary, but we would like to be notified for all releases so that we would have a heads-up as to what might be coming our way.

Commenter: Victor Pankey -- San Luis Rey MWD

Section: MRP D.1 and D.2

Comment:

We would like to be added to the notification under Paragraphs D.1 and D.2 in the event of a release.

We would like to be notified for all releases so that we would have a heads-up as to what might be coming our way.

Commenter: Johnny Pappas -- Surfrider Foundation

Section:

Comment:

The risk of contamination from a leakage are too great and the consequences too dire to allow this project to go forward. Mitigation measures are themselves inadequate.

Were a leak to occur, project proponents would have us believe that filtering contaminated groundwater would be sufficient.

Commenter: Guss Pennell -- City of Oceanside

Section:

Comment:

The City of Oceanside continues to oppose the landfill due to many concerns. Protecting the groundwater in the San Luis Rey watershed is of the utmost importance. Without a defined water source, the tentative permit for the landfill should be recalled. Without a water source, the landfill may try to rely on monitoring wells for providing water. This will alter the ability to detect leaks in the membranes.

Commenter: Hershell Price -- San Diego County Water Authority

Section:

Comment:

The liner will ultimately fail and this watershed will not be protected for future generations. Please remember Las Pulgas and the assurances that were given then. This will surely happen again at Gregory Canyon, and therefore this project must be stopped before it is too late.

Commenter: Hershell Price -- San Diego County Water Authority

Section:

Comment:

Local groundwater resources and watersheds have become more important than ever before. Now we are faced with the possibility that a landfill dump will be built directly upon the San Luis Rey River watershed. It is hard to fathom how this project has gotten this far considering the fact that it will eventually damage and perhaps destroy the use of this local resource. As has been well publicized, there is enough existing landfill space in San Diego County to last until at least 2029. Due to increased recycling of materials, less waste is being directed into landfills, perhaps extending the use even longer.

After reading your Mission Statement I have renewed faith that a waste discharge permit will not be issued. It states in part: To preserve, enhance and restore the quality of California's water resources... for the benefit of PRESENT and FUTURE GENERATIONS. The liner will ultimately fail and this watershed will not be protected for FUTURE GENERATIONS. Please remember Las Pulgas and the assurances that were given then. This will surely happen again at Gregory Canyon and therefore this project must be stopped before it is too late.

Commenter: Hershell Price -- San Diego County Water Authority

Section:

Comment:

There is enough existing landfill space in San Diego County to last at least until 2029. Due to increase recycling of materials, less waste is being directed into landfills, perhaps extending the use even longer.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

List of Potential Pollutants

- The list of potential pollutants that may be present in stormwater should be expanded. Constituents such as heavy organic loads, household cleaning products, personal hygiene products, waste debris, and floating trash bags should be included as potential pollutants.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Erosion and Sediment Control Methods

- (Section 2.3 pg 8) "Applying these practices will protect the soil surface and prevent soil particles from being detached by rainfall or wind" Where is the supporting documentation, calculation, and justification for determining which practices are most suitable to "protect the soil surface" and prevent detachment?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Facility Size and Impervious Area Percent Estimate

- (Section 6.0 pg 18) The acreage of each impervious area should be listed. Additional information about the nature of the impervious area, and the drainage features of each area would also be beneficial.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Erosion and Sediment Control Methods

- Have the costs incurred from inspections and subsequent maintenance been included in a feasibility level cost-benefit analysis? What is the motivation for the landfill to perform more frequent inspections which may in turn increase costs?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

List of Significant Spills or leaks

- (Section 7.0 pg 17) How will spills and leaks be documented throughout the life of the project? Will this section of the SWPPP be updated? If so, to what degree?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Outdoor Storage, Manufacturing and Processing Activities

- (Section 4.8 pg 15) "Dust control operations will be employed to reduce the amount of dust" A detailed description of frequency of application, dust monitoring, and implementation of dust control methods should be elaborated in this section.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Erosion and Sediment Control Methods

- (Section 2.3 pg 9) "The down drains are proposed at an average of 600-foot intervals"
- What are the calculations and assumptions used to justify the spacing and sizing of the down drains?
- What methods are employed to minimize clogging in down drains or buried pipes?
- What protocol is in place if clogging of down drains or buried pipes occurs?
- A discussion of a worst case scenario, where storm flows wash up straw, logs, geotextiles, etc. and subsequently clog down drains and channels should be included in the SWPPP, Possible use of trash racks or screens should be explored.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

List of Potential Pollutants

- (Section 5.0 pg 16) "if the working face of the landfill was uncovered at the time of significant storm event, the potential for polluted stormwater discharge would be created" this statement should be contained in the worst case scenario of every portion of the SWPPP as well as in the main body of the text. The implications of this occurring should be explored in depth, as exposed wastes washing into the San Luis Rey River could have severe health and public perception repercussions.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Erosion and Sediment Control Methods

- (Section 2,3 pg 9) "Inspection of the BMPs will be conducted and documented on a regular basis and maintenance repairs will be performed based on these routine inspections and on an as-needed basis."

- What is defined as a regular basis?
- How in-depth will the inspections be?
- How will they be documented?
- Who will perform the inspections?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Erosion and Sediment Control Methods

- (Section 2,3 pg 8) "The natural geologic conditions at the site will act as a type of BMP"
- What is the distribution of bedrock in the excavation area?
- Has the percent of the exposed rock face been quantified? and at what slope?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, C.2.8 Drainage Control

"A portion of the eastern channel will be constructed during the initial construction phase ... construction of the final western perimeter channel will begin during the Phase II excavation" (pg C.2-17).

The JTD should address the implications of a storm occurring during each phase of the project, and the worst case scenario.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:**Comment:**

JTD, C.2.8 Drainage Control

",. .the desilting basins are intended to control therate of discharge" (pg C.2,20).

- There is no discussion as to how the basins will control the rate of discharge.
- There are no calculations quantifying the velocity of water discharged from the basins.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:**Comment:**

JTD, C.2.8 Drainage Control

What precautions will be taken to assure that the buried drainage pipe and downdrains collecting surface runoff from disturbed areas do not get clogged by waste picked up by runoff?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:**Comment:**

JTD, C.2.8 Drainage Control

".. .the undisturbed areas will collect and convey run-on from the surrounding areas as well as runoff from the undisturbed areas within the refuse footprint. This system will consist of above ground perimeter drainage channels and energy dissipaters" (pg C.2-15).

"Energy dissipaters will be utilized to match pre-development discharge velocities." (pg C.2-18)

- There is no discussion on how energy dissipation at outlet of the channels will be accomplished.
- There are no calculations to reveal pre-development or potential postdevelopment discharge velocities.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Summary of Existing Sampling Data

- (Section 8.0 pg 19) What will be included in the "annual report"
- Are there multiple "stormwater dischargers"? or was this meant to be stormwater discharges?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Stormwater Management Practices

- Discussions about maintenance of all channels, pipes and drainage paths should be included in this section. Specifically, frequency of material removal, effect of scouring, visual inspections of channel and pipe integrity, and testing that there are no flow inhibitors in the buried pipeline. Required maintenance activities should be listed and described.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, B.5.1.6.1 Surface Water

There are other potential impacts to surface water that have not been fully addressed

- break-out of leachate due to perched leachate situations that develop within municipal solid waste landfills due to the plastic garbage bags effectively forming a liner within the waste which causes the leachate to discharge from the landfill through the sides of the landfill above the ground surface.
- pollution of surface waters is through the underdrains failure post-closure.
- treated leachate-polluted groundwater discharged to surface waters that may be adverse to fish, aquatic life and terrestrial life,

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, B.5.1.6.1 Surface Water

What monitoring techniques will be used at the outlet of the desilting basins to assure that the water quality discharged to the river is acceptable?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Erosion and Sediment Control Methods

- What are the BMPs in place to reduce erosion and sediment loads during blasting activities? How will blasting outfall be controlled, collected, and removed?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Stormwater Management Practices

- (Section 9.6 pg 23) "For additional details regarding stormwater management and BMP features refer to Sections 2.2 and 2.3". Comments on these sections were previously addressed. A summary table, schematic drawing, or succinct explanation of the stormwater collection system should be included in this section.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

On-Site Drainage Features

- (Section 2.2 pg 5) "The desilting basins will reduce the amount of silt ultimately discharged from the landfill site" The assumptions, calculations, and design of the desilting basins should be interpreted to relate variables such as settling rates, entrance and exit velocities, basin capacities, anticipated sediment yields, sediment oxygen demand, and residence time to the SWRPP objectives.

- (Section 2.2 pg 5) "Energy dissipaters will be utilized to match pre-developed discharge velocities." Pre-developed discharge velocities have not been defined. Methods used to identify and match pre-developed discharge velocities are not defined.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Erosion and Sediment Control Methods

- Figure 4A shows cross sections and detail drawings for BMPs. A description about the benefits, limitations, costs, and justifications of each BMP should be included in the SWPPP.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Erosion and Sediment Control Methods

- (Section 2.3 pg 9) "the site will be operated with a combination of BMPs"

What is the justification for implementing a specified BMP in each area?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Construction Related Activities

- (Section 11.2 pg 28) How will impacts from degrading pipes and channels be addressed?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Construction Related Activities

- (Section 11.1 pg 28) "No contaminants are anticipated to be associated with this construction" High levels of sediments may be considered a contaminant if the loads are identified to have a negative impact.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Non-Stormwater Discharge

- (Section 10 pg 27) What steps will be taken to eliminate or reduce the effect of leachate pipes bursting?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Recordkeeping and Reporting

- (Section 9.8 pg 26) "All records will be retained for a period of at least five years from the date of the report" Five years seems very short for a landfill that will be present for centuries.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Inspections

- (Section 9.8 pg 25) The check-list should be expanded to include inspection of

- integrity of levees and berms
- openings of downdrains
- passivity of water through buried pipes
- soil compaction
- sediment accumulation in channels

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Stormwater Management Practices

- There is no discussion as to how the failure of the buried perimeter drainage pipes would affect the stormwater run-off quality. Issues such as potential clogging, sediment buildup, and surging should be addressed with respect to impacts on stormwater quality.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Stormwater Management Practices

- The minimum required frequency of water application for dust control should be set within this section of the SWRPPP.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Stormwater Management Controls and BMPs

- (Section 9,4.1. pg 21) "the operator will conduct continuous inspections of the integrity of the cover"

- How often is continuous?
- What are key features that will be assessed?
- What level of compaction will be performed?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Erosion and Sediment Control Methods

- (Section 2.3 pg 8) "BMPs will investigate BMPs utilizing the Best Available Technologies that are an economically achievable approach"

Although this sentence is poorly written, it raises the following questions:

- Has an assessment of economic feasibility been performed?
- If so, which methods are most feasible?
- If multiple methods are feasible, what are the benefits and limitations of each method?
- What is the protocol for initiating a particular method in a problem area?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, C.2.8 Drainage Control

Table 9 Characteristics of Desilting Basins (pg C.2-20).

- It is unclear where the supporting calculations for the values in this table exist.
- The volume of each basin does not seem consistent as the capacity [AF] does not equal Acres x Depth which does not equal Length x Width x Depth.
- The values shown in the table do not match with the areas shown in the grading plan drawing.
- The contributing drainage area, HRT, and optimal flow velocity through each basin should be included in this table.
- The tons of silt calculated for each desilting basin should be supported by listing the assumptions, size of particles, and likely load contribution from the design storm.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Outdoor Storage, Manufacturing and Processing Activities

- (Section 4.8 pg 15) "Rock crushing will occur within the southern portion of the landfill footprint or conducted behind a berm which will reduce noise levels to acceptable levels" A description of who may be affected by noise levels, existing regulations concerning noise during construction activities, anticipated noise levels, and definition of "acceptable levels" should be expanded upon in this section.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, C.2.8 Drainage Control

"The basins ... will not retain water" (pgC.2.20).

This statement is misleading, as a specified retention time is required in order to allow for the particles to settle out. Thus, water will be retained to achieve the desired HRT for settling or particles.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Stormwater Management Practices

- What is the typical life of the buried perimeter drainage pipes? If the material life is less than the project life, how will they be replaced post-closure?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Stormwater Management Controls and BMPs

- (Section 9.4.1. pg 21) "Spills will be controlled with berms and absorbents"
- Are berms readily available (i.e. mobile berms) or efficient enough to collect spills?
- What materials will be used for these types of berms?
- What are potential leakage issues?
- If sand or clay berms are used, what is the protocol for disposing of contaminated sediments?
- How and where will spilled pollutants be transferred?
- What type of absorbents will be used?
- What are the implications if the absorbents are carried away by runoff?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Stormwater Management Controls and BMPs

- (Section 9.4.1. pg 21) "The exposed paved portions of the ancillary facilities area will be diy swept" How often?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Stormwater Management Controls and BMPs

- (Section 9.4.1. pg 22) "Operational equipment stored on-site will be located in an area where the possibility of polluting the stormwater is minimized"
- List potential areas where equipment will be stored.
- Will equipment be stored on impervious linings?
- Where will runoff from these areas drain?

- What criteria are used to determine where pollutants carried in stormwater will have the least effect?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Stormwater Management Controls and BMPs

- (Section 9.4.1. pg 21) "additional wet weather operating practices may be implemented" Expand on the definition of "wet weather" and the associated practices.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Inspections

- (Section 9.8 pg 24) "Inspections will be performed before and after storm events". What defines a storm event?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Erosion and Sediment Control Methods

- (Section 2.3 pg 8) "areas most prone to erosion will be identified"

Areas most prone to erosion should already be identified with management practices already assigned.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

Hydraulic Residence Time (HRT): A discussion of hydraulic residence time should be included in the Basin Efficiency analysis. HRT is defined as a measure of the average time that water remains in a system, and is calculated as volume divided by flow or length divided by velocity. The HRT should dictate the maximum flow capacity of the desilting basins which will allow for the desired particle size to settle.

- What is the time required for settlement of the 0.02 mm particle (function of settling rates and depth of the basin)?
- What is the HRT of water in the desilting basin? (a function of settling time and dimensions of the desilting basin)?
- What is the velocity that must be maintained through the desilting basin to assure that the required HRT is achieved?
- What is the velocity of flows entering the desilting basins? And how will the energy be dissipated to aid in the settling of particles and to assure that the required residence time is achieved?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

Discharge Locations

There are three discharge locations identified on the Final Drainage Plan (Drawing 7), Water discharges from the site at one of two energy dissipaters and from the southwest corner of the ancillary facilities area. Monitoring of the discharge is only suggested at two of the three discharge sites. The JTD recommends monitoring the discharge from the East Desilting Basin and the discharge from the ancillary facilities area. The JTD does not provide an appropriate reasoning why the West Desilting Basin should not be monitored. The Downdrain Systems that delivers water to the two desilting basins are independent systems which would suggest that contamination could occur in one without occurring in the other. For this reason alone, monitoring should occur on all points of discharge from the landfill facility.

The design of the energy dissipaters and the discharge points has not been clearly described in the current JTD. Important information regarding pre-project and post-project water velocity has not been provided in the current documentation. Similar to other sections of the JTD, the physical description of the discharge locations provide no assurance the public water supply will be protected.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:**Leachate Control and Removal System (LCRS)**

The LCRS is designed to collect leachate and convey that leachate to storage tanks located in the ancillary facilities area. Leachate that is collected in the pipe network will be conveyed to two 10,000 gallon storage tanks before being transported for off-site treatment. The design of the LCRS and the storage tanks leaves little room for design error. Section C of the JTD indicates that leachate generation will peak at 1,236 cubic feet per day, equivalent to 9,200 gallons per day. During peak leachate production periods, a little more than two days of leachate storage will be available from the two 10,000 gallon tanks. The potential for leachate spill to surface waters will increase as maximum storage is met and the need to handle leachate becomes more frequent. Additional storage should be included in the project to reduce the handling of leachate and reduce the potential for spill.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:**Comment:****Subdrain System**

The Subdrain System is intended to capture rising groundwater beneath the landfill liner, but there appears to be no supporting documentation or calculations for the actual design of the Subdrain System in the JTD. The following critical questions must be addressed in the JTD to assure the integrity of the Subdrain System design: (1) what are the sizes of the slotted and solid pipes? (2) What is the capacity of the storage tank and how will the water eventually be treated or discharged to the San Luis Rey River? (3) Where does the water in the Subdrain System go if the solid pipes clog? (4) When there is a break in the landfill liner, what volume of leachate could be expected to occur in the Subdrain System?

Throughout the review of the JTD, the detail and description of the Subdrain System is the most egregious attempt to avoid discussion of possible contamination of the public water supply. The Subdrain System may be one of the most important facilities of the GCLF project. It is intended to protect the liner from the pressure of rising groundwater, one of the key reasons why the landfill has decreased in size and volume since its original conception. The importance of this facility warrants an entire appendix that discusses flow rates, storage volumes, monitoring locations, maintenance practices, and repair.

Based on Stetson Engineers experience with landfill designs, all liners will eventually leak. What is unknown about the Subdrain System is what will be affected when leaks begin to occur. Will the Subdrain System act to mitigate the leak by collecting leachate in a storage tank or will it act to aggravate the leak by spreading the contamination over a larger area? Similar to the lack of documentation in Appendices I and J, the lack of detail suggests that the system has not accurately been designed and that adverse impacts to the public water supply will eventually occur.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

Landfill Downdrains

The Landfill Downdrains collect runoff on the landfill, eventually discharging into one of two desilting basins. The desilting basins are intended to reduce the amount of silt ultimately discharged to the San Luis Rey River and to also capture runoff from the landfill site so it can be tested for contamination. Any possible contamination of stormwater from the landfill footprint is likely to be seen in the Landfill Downdrains.

On a conceptual level, it is unclear how each drop of water falling on the landfill will be directed through the downdrain system. The JTD describes the path of stormwater that falls on the landfill as first being intercepted by berms located along the edges of the landfill deck, then guided through metal flumes, directed into trapezoidal downdrains, eventually discharging to pipe laterals which are connected to buried storm drain pipes that eventually convey the runoff to desilting basins. There is either little or no discussion about the actual design assumptions and criteria for each segment of this system. The following critical issues have not been addressed in the JTD; (1) clogging of flumes, (2) runoff on the access haul roads, (3) sizing and flow in the trapezoidal downdrains, (4) hydraulic transition from channel to pipe lateral, (5) hydraulic retention time in the desilting basins, and (6) preventative measures to assure that runoff does not flow into the Perimeter Storm Drain which discharges directly to the San Luis Rey River.

The design of the Landfill Downdrains provided in the JTD is inadequate due to the following concerns with the hydrologic and hydraulic analyses:

(1) A nexus between the hydrologic analysis and Section C of the JTD does not exist. Although Section C of the JTD indicates that the 10-year, 6-hour rainfall data was used to calculate the efficiency of the desilting basins, the appendix indicates that the desilting basins were designed for a 100-year storm event. Table 4.1 of Title 27 indicates that all stormwater facilities for a class III landfill should be sized to handle the 100-year 24-hour rainfall event.

(2) The JTD is inconsistent between the figures and tables. As previously noted, table 9b does not support the figures depicting the final drainage plan (Figure 17) and grading plan (Figure 20) of the desilting basins. The resulting capacities of the two desilting basins do not reflect the difference in drainage areas.

(3) As discussed above, the documentation lacks the detailed hydraulic analysis required to assure that the Landfill Downdrains and desilting basins have been properly designed to ensure that contaminated water from the landfill footprint will not discharge to the San Luis Rey River before it could be treated.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:**Perimeter Storm Drain**

The design of the Perimeter Storm Drain is critical to the conveyance of storm water runoff from the drainage area around the project area and the "undisturbed portions" of the landfill. The supporting hydrologic and hydraulic analysis is insufficient to support the design of the Perimeter Storm Drain. The most recent version of the JTD contains less information than what was provided in earlier documents, causing the reviewer to question the adequacy of the design of the Perimeter Storm Drain.

Appendix I does not contain the supporting documentation to provide reasonable assurance that the peak flows have been adequately estimated. Since the design of the Perimeter Storm Drain relies heavily on the hydrological analysis, incorrect assumptions in surface water modeling will lead to improper design of the Perimeter Storm Drain which could result in erosion of the landfill walls, overflowing of the energy dissipation facilities, and potential spill into the landfill. Because of the importance of the peak flow calculation, the assumptions used to estimate the peak storm event should be clearly defined.

Appendix J and Section C of Volume I do not provide adequate technical information to support the design of the Perimeter Storm Drain and the assurance of protection to the public water supply. For example, the energy dissipaters are supposed to be able to reduce the flow in the perimeter storm drain channel to match pre-developed flow velocities. Yet, pre-development flow velocities are not defined in the JTD, and the anticipated flow rates in the trapezoidal channel during storm events are omitted from the most recent version of the JTD. Thus, there is no assurance that the energy dissipaters will be able to perform the task of matching predevelopment velocities.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:**Comment:**

The following review describes errors and inconsistencies in the hydrologic and hydraulic analysis, the four collection systems, and the design criteria that were used to develop each system. Furthermore, the potential impact to the San Luis Rey River and the public water supply from each of the three discharge points will also be explained in detail. Finally, additional studies are recommended to assure no contaminants or sediment will be discharged from the site. Additional comments and concerns are provided in Attachments A-C.

HYDROLOGY AND HYDRAULICS

The most recent version of the JTD lacks a nexus between the hydrologic analyses and the design of the drainage and storm water control facilities. Furthermore, the JTD does not contain a detailed hydraulic analysis sufficient to support the design of these water-conveyance facilities. The following examples are indicative of the discontinuity between the JTD and the technical analysis. The existence of these obvious flaws suggests that GCLF and the RWQCB still do not understand how surface runoff will be controlled. The incomplete design of surface

runoff on the GCLF site will have a detrimental effect on water quality in the San Luis Rey River.

The most evident example of inadequate information is the contradiction which exists between the text of the document and its supporting documentation. JTD Section D.3.2 states that "The resulting peak flow rate for the pre-developed condition is approximately 765 cubic feet per second (cfs), ...and the post-development peak flows from the site would be approximately 807 cfs ". However, Appendix I of the JTD, which contains the hydrologic model used to derive the peak flow, states that the pre-development flow rate is 692 cfs and that the post-development flow rate will be 505 cfs. This discrepancy in peak flow values, and whether the post-project peak flow is increasing or decreasing, suggests that there are critical flaws in the design of facilities that are intended to protect the public water supply.

Another major inconsistency exists between Volume I of the JTD and the SWPPP. While Volume I suggest that all stormwater runoff on the landfill footprint will be routed to the perimeter storm drain once an area reaches 20 percent of its pre-development vegetation level (C.2.9,2,5), the SWPPP indicates that stormwater will be routed to the perimeter storm drain only if the area reaches 70 percent of its pre-development cover (SWPPP, page 6). Because water in the perimeter storm drains discharge directly to the San Luis Rey River, the difference in sediment loading could be significant, and the RWQCB should hve required clarification of this issue.

Similarly, it has not been demonstrated that the perimeter storm drains have been sized to convey the 100-year 24-hour storm for the entire undisturbed and disturbed footprint. Section C.2.8.3.2 indicates that the perimeter storm drain "is intended to control run-on (from adjacent areas to the landfill) that might otherwise flow onto the landfill." The design of the perimeter storm drains are in clear violation of Title 27 requirements and will ultimately result in contamination to the public water supply due to failure of this facility.

The hydraulic design flaws in the perimeter drainage channels, which Stetson Engineers review of the JTD has identified, were based on comparison of omitted data from previous versions, insufficient detail, and lack of a nexus between design drawings and the technical analysis. The following three examples demonstrate a few of the hydraulic errors and inconsistencies found in the most recent version of the JTD;

(1) Supporting calculations in the appendices describing flow rates and volumes have been eliminated from the JTD, when compared to previous versions. For example, the velocity of the water in the trapezoidal storm drainage channels was previously estimated to be over 30 feet per second and flow in a "supercritical" condition. This data has been omitted from the most recent version of the JTD. This information is critical to determine if the design of the structures will be capable of conveying the design flows without failure.

(2) The technical hydraulic analysis does not provide sufficient data about the sizing and capacity of each trapezoidal channel, v-ditch, and pipe laterals designed to convey storm water off the site. For example, Drawing 21 shows a detail of a downrain trapezoidal channel but there are no design calculations to support the sizing of this channel. Similarly, insufficient design calculations are provided for the v-ditches and pipe laterals.

(3) The size of the desilting basins described in the design drawings does not match their description provided in the text of the JTD. Table 9B states that the eastern and western desilting basins have an area of 1,8 and 3,7 acres, respectively, whereas Drawing 28 shows the grading plan for the desilting basins has approximately the same surface area.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

Mitigation Monitoring and Reporting Program (MMRP)

The Mitigation Monitoring and Reporting Program for Project Impacts (MMRP) has been modified in Appendix D-2 to include an excerpt from the certified FEIR (dated December 2002), The reported mitigation details provide a clearer description of activities related to each proposition, except for the case of hydrogeology and surface hydrology, which only references compliance with the RWQCB requirements.

The previous version of the JTD included 12 section describing the sampling activities and reporting requirements that are omitted in the most recent JTD. The previous version of the MMRP relied too heavily on the subjectivity of the landfill operators to monitor and report inefficiencies or inadequacies in the SWPPP. The updated MMRP provides less guidance since trigger levels or action criteria are not identified. Since the updated MMRP directs the RWQCB to approve the design and monitoring of the landfill linear and leachate collection system, further stating that the project will comply with the requirements of the RWQCB to assure protection of surface and underground water quality, it is critical that the RWQCB requirements that are applicable to the Gregory Canyon Landfill be discussed in the MMRPP.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, C.2.8 Drainage Control

In section C.2.8.3.4 on page C.2-20 it states that "Before each rainy season, after each major storm and monthly during the rainy season, all drainage facilities will be inspected and any required maintenance performed to ensure that the drainage channels and desilting basins function properly"

- What is considered to be a "major storm"?
- What is the date signifying the start of "each rainy season"
- What will the criteria be for assessing the drainage facilities and the required maintenance? And what are the criteria that define "function properly"?
- Who will perform the inspections?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

RECOMMENDATIONS

A nexus needs to be developed between the hydrologic analysis and the design of all water conveyance facilities. As shown throughout our review, there is a clear disconnect between the text of the JTD and the appendices that support the text. The purpose of providing such a nexus is to allow the RWQCB to review a design that is based on sound engineering and science in order to assess the project's impact to the public water supply. As stated earlier, the current document prevents the RWQCB from making such a determination.

Many of the recommendations provided below apply to one or more of the collection systems described in the previous sections of this document. They are organized so that specific issues that are related to one or more of the drainage system may be identified and reconciled in the design of the GCLF. The recommendations below present a summary of the inconsistencies and technical issues that should be addressed. The impact of not properly addressing the hydrologic and hydraulic issues in the design of the GCLF could result in a threat to the water supply of downstream water users.

The following recommendations set forth a plan that will provide a professional level of documentation regarding the design of the GCLF.

- (1) Prepare a Technical Memorandum (Appendix I) regarding the hydrologic analysis that clearly outlines the methodology and assumptions that were used to determine the 100-year peak flood event. The Technical Memorandum must contain summary tables that can be referenced from other appendices. The summary tables must address the physical properties of pre-project, post-project, disturbed, and undisturbed areas that are used for the many of the design calculations. This Technical Memorandum should replace the current Appendix I.
- (2) Re-write Appendix J so that it references tables in the hydrologic analysis (Appendix I). The design flow parameters for each facility should be clearly identified and discussed. All stormwater and subdrain facilities should be individually addressed. If facilities are designed for supercritical flow, then potential adverse impacts should be discussed. The design of the desilting basins should include supporting calculations pertaining to key parameters such as; hydraulic retention time, flow velocities, scour potential, water capacity, sediment capacity, and turbidity impacts.
- (3) The control of floating debris from working areas entering the downdrains should be addressed. The potential for blocking of the metal flumes, downdrains, pipe laterals, and drainage channels should be considered in the design of the landfill downdrain system to prevent polluted runoff bypassing the desilting basins and discharging directly to the San Luis Rey River.
- (4) Analyze the Subdrain System. Similar to the LCRS, provide an operation and maintenance plan to assure the successful operation of the facility into the future. Anticipated flow rates from rising groundwater and leaking leachate should be addressed. Groundwater levels from this spring should be sampled and included in the analysis of anticipated flow rates. Supplemental hydrogeologic data pertaining to the flow conditions in the weathered and

unweathered bedrock should be clearly addressed. Additional pump test data should be performed in order to provide a clear indication of groundwater flow beneath the landfill and the San Luis Rey River.

(5) Conduct a water level survey of all monitoring wells, if not already completed. The response to this year's rainfall events should be recorded and discussed. Responses in groundwater wells will provide insight into the design of the Subdrain system.

(6) Update all sections of Volume I to be consistent with the appendices. The update should include a complete description of each facility to reflect the data presented in the appropriate appendix.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix I

A discussion of the implications of a short basin time of concentration T_c with respect to flood flows arriving at the project site should be included to assess channel design, flood flows, and desilting basin capacities.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix I

A detailed table or map showing soils and land use for each sub-basin should be included to support the runoff coefficient "C" used for each sub-basin for both developed and undeveloped conditions. (D.3.2. only discusses $C=0.4$ for pre-developed conditions)

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix I

A table showing 100-year runoff for pre- and post-development at each node should be included in the text, as it is difficult to read the tables included in the Hydrology Map figures.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix J

- The methods used to determine desilting basin efficiency should be clarified to provide a succinct explanation about the assumptions made, the equations applied, all sources used, and the ultimate design standards applied.
- As previously noted, there should be a nexus between the design calculations in the Appendix, the tables in the text, and the drawings shown throughout the JTD.
- The calculations included in the Appendix are difficult to read and lack the detail one would expect to find in a final document.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix J

Hydrology: The basin efficiency equation uses the 10-yr 6-hour event.

- What will happen when a 100-yr event occurs? How much uncovered area could be served? What will happen to the runoff from the areas that cannot be served?
- The repercussions of not being able to divert high flows through the desilting basins will result in high turbidity water entering the San Luis Rey River. How will this be addressed?
- Higher flows from the 100-yr event will carry more sediment, and may also scour out the existing sediment in the desilting basins. Where will the higher flows be directed to or how will they be managed?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix J

Medium silt particle: The "0.02 mm entrapment particle size was based on site conditions" (C.2.8.3.4).

- Has a sieve analysis been performed to show particle size distribution?
- Has a Hydrometer test been performed to determine the distribution of particles smaller than 0.075 mm?

- What are the anticipated sizes of cover material, which is the loose material more likely to run off from the landfill during storm events?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix J

Basin Efficiency Equation: What is the source of the Basin Efficiency Equation?

- What are the assumptions made to determine the 1.2 coefficient? What variables are assumed or held constant (i.e. basin dimensions?)
- The summary table of particle size, area, and settling velocity was omitted from the updated version of the JTD. What size particles are now used to calculate basin efficiency?
- What is the velocity of the flows entering each basin, through each basin, and leaving each basin?
- How will the turbulence at the entrance of the desilting basin effect settling rates and basin efficiency?
- How will the outlet of the desilting basin effect settling rates and basin efficiency?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

On-Site Drainage Features

- (Section 2.2 pg 6) "Maintenance crews will clean out the basins annually"
- Is there data that suggests that annual cleaning sufficient?
- How much material is likely to collect during a 10-year and 100-yr storm?
- Should cleaning be performed after a large storm even occurs?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD Volume I

B.5.1.3.2 During water quality sampling, flow quantity in the San Luis Rey River should be recorded from near-by USGS gages or estimated based on a rated stream channel and staff gage.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:**Comment:**

JTD Volume I

C.2.5.4 The design of the LCRS design relies on the smooth flow of leachate through pipelines buried in V-shape trenches constructed within the top of the liner system. HDPE pipe could present an issue regarding reliability due to unforeseen stresses such as earthquakes or heavy equipment. A break in the pipeline at the most downstream end of the LCRS presents the biggest risk to natural resources in the area. The questions that need to be addressed is (1) whether steel pipe would provide a higher level of assurance that the resources are protected and (2) what impacts would the groundwater model predict if catastrophic failure occurred?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:**Comment:**

JTD Volume I

C,2.5.3.1 The peak leachate production rate of 1,236 cubic feet per day is equivalent to more than 9,200 gallons per day. During peak leachate production periods, a little more than two days of leachate storage will be available from two 10,000 gallon tanks. The potential for leachate spill to surface waters will increase as maximum storage is met and the need to handle leachate becomes more frequent. Additional storage should be included in the project to reduce the handling of leachate and reduce the potential for spill.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:**Comment:**

JTD Volume I

C.2.4 A feasibility level design report would identify the costs associated with liner construction and assure the public that the approved liner design will actually be constructed.

The Regional Board's comment #3 of their March 5, 2004 letter to Mr. Richard Chase clearly states the concern for natural resources in the vicinity of the proposed project. The integrity and testing of the liner prior to receiving refuse should be clearly addressed in this section of the JTD.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD Volume I

C.2.3 Similar to comment B.5.1.3.1 - Two years, or more, of baseline data collected prior to project start-up would help identify the highest groundwater level.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD Volume I

C.2.2.3 A feasibility-level design, including an economic analysis, is required to identify the costs of using Alternative Daily Cover (ADC) in lieu of native soil. The cost of importing 4.3 mcy of material should also be addressed.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD Volume I

C. 1.1 The statement "The engineering plans are conceptual and reflect proposed design" suggests that the feasibility of the project has not been clearly addressed. The total cost of the project is based on a certain level of design that should be known within a window of +/- 20% before final design. A reconnaissance level-study, similar to what the text refers to as "conceptual", suggests that the level of design is enough to help facilitate the decision as to whether or not the alternative should be studied in greater detail. Little or no assurance is provided in the JTD that the conceptual level design will not be compromised because of unforeseen costs that would have been identified in a feasibility-level design. The exact quantity of cover and liner material, the cost of importing cover and liner material, and excavation costs could greatly influence future design changes.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD Volume I

B.5.3.6 Does the JTD estimate impacts from odor using a model and historical wind data? If so, the analysis should be presented in this section.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

Storm Water Pollution Prevention Plan (SWPPP)

The Stormwater Pollution Prevention Plan (SWPPP) presented in Appendix D, Volume II, is vague, subjective, and does not provide adequate protection to other water users in the San Luis Rey River system. The SWPPP should be updated to include the most up-to-date design and

associated activities in a final form. The level of detail in the SWPPP should be consistent with the phase of review the GCLF is currently undergoing. Descriptions pertaining to inspection activities and frequencies of occurrence should be defined in greater detail, to assure that the operation of the GCLF will focus on providing the maximum protection for public health. The SWPPP should reference the matrix provided in the MRPP (from the FEIR) where applicable. Descriptions of pollution control activities should address worst case scenario possibilities such as leachate pipes bursting, drainage channels and pipes closing from loose debris, and other facilities failing. Though numerous comments have been submitted regarding the SWPPP, No revisions to the JTD SWPPP has been conducted since the last version. Additional comments related to the SWPPP are provided in Attachment C.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD Volume I

B.5.1.5.4 Section B.5.1.1.4 estimated the gradient in the alluvial aquifer to be 0.0025 ft/ft. This section suggests the gradient is 0.045 ft/ft, equivalent to a one foot drop every 25 feet.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix I

A technical memorandum describing the hydrologic model, assumptions, constants, and other parameters should be included in Appendix I for completeness.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD Volume I

B.5.1.3.1 This section of the JTD should identify if the monitoring wells intersect fractures and joints that have been previously mapped.

B.5.1.3.1 Two years of baseline data collected prior to project start-up would provide the necessary data required to identify the seasonal fluctuation of the groundwater levels.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD Volume I

B.5.1.1.4 The groundwater gradient is 0.0025 ft/ft, based on the parameters presented in the text.

The impact to groundwater quality is estimated based on a leachate leakage rate of 1,850 gallons per day, as compared to the peak leachate production rate of 9,200 gallons per day. A higher leakage rate could be expected to occur if there was a catastrophic failure in the LCRS. The model should test the sensitivity of the leakage rate to the impairment of the groundwater quality in both the alluvial and bedrock aquifers.

Similar to the "Analysis of Potential Impairment to Groundwater", a section of the JTD should address the "Analysis of Potential Impairment to Surface Water". Uncontrolled discharge to the San Luis Rey River from the LCRS, or rupture of the leachate storage tanks, should be addressed.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD Volume I

B.3.1.8 The JTD should clearly identify that two 10,000 gallon tanks are available for LCRS outfall and another 10,000 gallon tank is available for subdrain discharge. The language is not clear as to whether there are a total of two 10,000 gallon tanks or three.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD Volume I

B.3.1.4 This section of the JTD should identify the groundwater wells used to supply the potable water.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD Volume I

B.2.2.2 Do records identify the historical fluctuation in ground water levels to make the statement "Although no groundwater is anticipated to accumulate in the subdrain system" a true statement?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD Volume I

A.3.5 The recorded monitoring data for surface, subsurface, air, and gas should be gathered in an electronic database and posted on a web site for public review.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD Volume I

A.3.5 The recorded monitoring data for surface, subsurface, air, and gas should be gathered in an electronic database and posted on a web site for public review.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Borrow/Stockpile Area Drainage Features

- (Section 2.2 pg 7) "The drainage control facilities will direct the surface runoff into the existing streams" It is not clear whether runoff from area A enters a desilting basin before discharging into the river.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix J, Drainage Calculations

A more detailed description of the drainage areas flow contribution to each channel, and the orientation of each channels should be explained more clearly. A summary table defining assumptions, and showing results would be beneficial as the design drawings are difficult to read.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

The overall operation of the drainage control system is not clearly identified; creating confusion as to where the water flows from point of interception with the ground surface to discharge into the San Luis Rey River. A schematic with drainage areas, nodes, and flow paths supplemented by tables identifying drainage acreages, flow volumes, and design parameters should be added to the JTD in the appropriate sections.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Refuse Area Grading

- (Section 2.2 pg 8) "The active face ... will be kept as small as practical" What is the maximum and minimum area that can be exposed at a given time? Guidelines should be included in the SWPPP including justification for requirements.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Refuse Area Grading

- (Section 2.2 pg 8) This section should set detailed guidelines for refuse area grading; such as specifications on soils cover thickness, compaction, and particle size. An analysis of sediment mobilization should play a role in the determination of particle sizes that may be used as soil cover to maintain a minimal risk of mobilization during large storm events. For example, what is the maximum particle size that may be picked up by flows from a 100-year storm? Only particles larger than this size should be used as landfill cover, particularly in the winter months

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Borrow/Stockpile Area Drainage Features

- (Section 2.2 pg 7) "In addition, as a further precaution, surface water flows created during storm events will be monitored at two locations on-site"

- What constituents will be measured and at what frequency?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

The results from the calculations in Appendices I & J are not clearly tied in with the summary in Volume I of the JTD. The Appendices and the main body of the JTD should source all relevant

equations, show supporting evidence for all assumptions, describe the application of the results, and investigate potential implications and failures of each part of the design.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Borrow/Stockpile Area Drainage Features

- (Section 2.2 pg 7) "Interim drainage and erosion control features will be constructed for all borrow/stockpile areas as necessary" Who determines when additional features are needed and by what standards?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

Though the design parameters for most of the surface water control facilities are based on a 100-year event, the "worst case scenario" discussed in the JTD does not address obvious implications of the 100-year event occurring at the site. Issues such as the washing out of soil cover, surface water contact with exposed waste, floating trash bags, leachate breach through landfill side walls, clogging of channels and drainage pipes with natural or landfill debris, and other failures are not addressed in the JTD. The occurrence of any failure has the potential to impose a considerable threat to the health of the San Luis Rey River and the groundwater system.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Interim Drainage Control

- (Section 2.2 pg 7) "Silt fences and sand bags may also be used to dissipate energy and remove silt upstream of the basins"

- The goals, criteria, and methods of implementing energy dissipation and silt removal should be more clearly defined.

- Has a feasibility level assessment of silt fences, sand bags, and other energy dissipation methods performed?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

On-Site Drainage Features

- (Section 2.2 pg 6) "Once an area reaches a state of 70 percent native vegetation, stormwater flows from the area would again be diverted into the PSD system"
- What methods will be used to determine 70 percent cover? (plant height, root system stability, density?)
- What method will be used to assess the compaction of the soil cover? (i.e. erosion potential?)
- Who will perform the assessments?
- Why does Volume I Section 2,9.2.5 indicate that stormwater will be routed to the perimeter storm drain once an area reaches a state of 20 percent native vegetation?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD Volume I

C.2.5.4.1 See comment to C.2.5,3.1

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

SWPPP Review and Revisions

- (Section 1.2 pg 1) "If the RWQCB determines that the discharger is in violation of the General Permit, the SWPPP shall be amended and implemented in a timely manner"
- What is considered to be a "timely manner"?
- What are the repercussions if a violation occurs (i.e. fines, site closure)?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

General Comments:

- The SWPPP would benefit from the inclusion of a few summary tables to clearly define the purpose and intent of the SWPPP. A list of areas of concerns, inspection frequency, monitoring requirements, and the associated action plan such as frequency of activities, contact agency and other details to clarify all actions required by the SWPPP. The matrix included in Appendix D-1 should be referenced where applicable.
- The level of detail in the SWPPP does not appear to be consistent with the phase of review the GCLF is currently undergoing.
- Descriptions pertaining to inspection activities and frequencies should be defined in greater detail, to assure that the operation of the GCLF will not be limited to the minimum effort required, but rather actions will focus on providing the maximum protection for public health.
- Descriptions of pollution control activities do not sufficiently address worst case scenario possibilities.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix J, Drainage Calculations

A schematic showing drainage areas contributing to each channel, flow paths between channels and into the desilting basins, and discharge points to the river would clarify many questions pertaining to source and impact locations.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Borrow/Stockpile Area Drainage Features

- (Section 2,2 pg 7) "The pre-developed drainage condition of the area will be maintained"

- What is defined as "pre-developed drainage conditions"?
- How will the success or failure of maintenance be measured?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix J, Drainage Calculations

There are less drainage calculation worksheets included in the updated version of the JTD. Typically, a final document would show a more complete set of supporting calculations, not less.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

The design of the desilting basins lacks supporting calculations pertaining to key parameters such as; hydraulic retention time, flow velocities, scour potential, water capacity, sediment capacity, and turbidity impacts. System failures, such as downdrains washing-out, or buried drainage pipes clogging, are not clearly addressed or supported in the appendices or in the JTD. Additionally, it is misleading which drainage areas feed into the desilting basins and which portions by-pass the system.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, B.5.1.6.1 Surface Water

- "...the worst case surface water release scenario involves transport of minor volumes of landfill constituents in run-off to the San Luis Rey River" (pg B.5-18). What is considered "minor volumes" and what are the calculations supporting this estimation?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, B.5.1.6.1 Surface Water

"...since run-off will be controlled in a drainage system designed for the 100-year storm" The drainage system may be designed for the 100-year storm, but there is no storage capacity to retain the runoff from a 100-year storm to allow for testing or treatment of waters that come in contact with wastes.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix D

Ancillary Facilities Area

- (Section 2.2 pg 8) the following statement is unclear "Precipitation onto the exposed paved areas of the ancillary facilities area will shut flow to a low point at the northwest corner"

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix J, Drainage Calculations

Issues pertaining to high velocities entering the desilting basins, such as scour potential and inhibition of settling, should be addressed in terms of basin efficiency and maintenance.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix J, Drainage Calculations

High velocities may cause degradation of the pipes and channels in the long run. Maintenance activities should be planned accordingly to prolong the life of drainage materials and to set forth guidelines for replacement. Who will maintain these facilities post-closure?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix J, Drainage Calculations

Previously, high velocities and supercritical flow conditions were shown on the calculation spreadsheets included in Appendix J. Were there changes to the design that decreased velocities, or were the results excluded for other reasons?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD Volume I

F. 1 Review of the cost estimate for the final cover indicates that soil used for the foundation layer will be available on site. Based on the available quantity of material from the excavation of the site and the two borrow pits, it is not clear if the soil required for the final cover will be available. This section of the JTD should discuss the availability of the material required to complete the closure of the landfill.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, B.5.1.6.1 Surface Water

The worst case scenario should consider the potential of a 100-year storm with intense rainfall which may:

- wash away newly placed cover soils and create deep fissures in the landfill cover, exposing wastes to surface runoff
- transport exposed landfill materials,
- clog the drainage channels or pipes,
- scour out the sediments in the desilting basins,
- and potentially release landfill wastes, high sediment loads, and low quality water to the San Luis Rey River.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix J

Turbidity: Increases in turbidity can effect fish populations, benthic organisms, and inhibits instream primary producers.

- What are the standards for return water turbidity? (This is relevant to the sizing of the desilting basin and the residence time in each basin as the unsettled particles will be discharged to the river with the potential to increase turbidity in the river, and impact the biota.

- Has a turbidity test been performed on a sample containing on-site particles? Will turbidity tests be included in monitoring?
- A discussion of turbidity, the potential impacts, and management practices should be included in the SPPP, MPRR, and erosion control plan.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, B.5.1.6.1 Surface Water

"...the volume of impacted water that might be released from the site is expected to be minimal" (pg B.5-18). What is the basis of this statement? Where are the supporting calculations showing volume of runoff, quality of impacted water, discharge rates, HRT, etc?

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix J, Drainage Calculations

The circular, trapezoidal, and triangular channel calculations of velocity were removed from the updated version of the JTD. This information is critical to determine the proper design and engineering of the surface and subsurface drainage facilities.

Commenter: Stephen Reich -- Stetson Engineers, Inc.

Section:

Comment:

JTD, Appendix J

Water Quality: As stated above, water quality can be negatively affected by turbidity.

- What is the anticipated concentration of organics in the sediment, and the subsequent oxygen demand of these sediments?
- How will the oxygen demand of these sediments be addressed to maintain a DO concentration in the discharge from the desilting basins that is favorable for fish and primary producers in the river?

Commenter: Bruce Reznik -- San Diego Coastkeeper

Section:

Comment:

The proponents of the landfill have yet to respond to major problems surrounding the construction, or the threat the landfill poses to San Diego County's water resources. As highlighted in the Regional Water Board's Draft Technical Report and a separate letter provided on behalf of River-

Watch, the proposed landfill threatens the San Luis Rey River, which provides drinking water to the City of Oceanside, among others.

Commenter: Justin Ricci -- Private Individual

Section:

Comment:

I understand every measure is being taken to ensure the safety of this project, but that is why they are called accidents! We can avoid ALL risk of accidents polluting our environment by simply not allowing this project to go forward.

Commenter: Bill Ring -- Private Individual

Section:

Comment:

I worked for the County of San Diego and was involved in the study to find new landfill sites 20+ years ago. While we were obtaining a title report to inspect Gregory Canyon as a potential site the company presently seeking a permit moved in and bought the property. The County study ultimately rejected the site because of its proximity to the San Luis Rey River. The vote that denied the County jurisdiction to regulate the site was a very cynical move foisted on voters who had no idea where this site was located or what the consequences of their actions were. The campaign was based on one company with the resources to present their side of the case against no real opposition (the opposition was unfunded).

Commenter: Brad Roth -- Carlsbad Watershed Network

Section:

Comment:

These comments are made on behalf of the Carlsbad Watershed Network (CWN). CWN is a coalition of organizations whose goal is "To protect, restore and enhance the quality and beneficial uses of water, habitats, and other natural resources of the watersheds of the Carlsbad Hydrologic Unit (CHU) and the adjacent coastal shoreline." Although this project is outside our member watersheds, we feel the decision in this case will be precedent setting, ultimately affecting all watersheds in this region.

All CWN member organizations voted approval of this letter except the following, which have not been able to take a vote to date: Agua Hedionda Lagoon Foundation and the Resource Conservation District of Greater San Diego County. In addition, Friends of Loma Alta Creek voted approval.

On behalf our member organizations, I respectfully request that the San Diego Regional Water Quality Control Board (Regional Board) continue to protect the waters of the State by disapproving this Tentative Order. Located close to the San Luis Rey River and Aquifer, the proposed project would pose a significant threat to water quality. These vulnerable water resources provide crucial beneficial uses to local residents and the municipalities located in proximity to the proposed project.

There are numerous problems with this site, identified in the Regional Board's own Technical Report ("Draft Technical Report, Order No. R9-2009-004, Proposed Gregory Canyon Landfill"). It overlies a fractured bedrock aquifer, hydrologically connected to a larger aquifer, making flow regimes and the movement of contaminants difficult to predict. The risk of contamination to the River and Aquifer from this source will greatly increase during years of high rainfall.

Past landfill projects such as the Las Pulgas and Poway landfills have shown that so called protective liners can and do fail. The degradation of liners by leachates from trash and ground movement from settling or other causes makes liner integrity highly uncertain. Even though the dump may be open for 30 years there is the potential for the next 100 years or so for the materials to break down, the liner to break and the ruination of the river and aquifer.

Add to these unacceptable risks the already significant traffic congestion on State Route 76, and that the proposed project would destroy a beautiful canyon and sacred Pala Band Native American site.

This project has a documented history of political and public relations manipulation. From the County's initiation of a North County landfill site search in 1985 until 1992, the Gregory Canyon site was not mentioned or considered viable. All the local permitting agencies had opposed it, and the site was at the bottom of the list. Please do not pave the way for this unneeded project, sited in the wrong place.

The Regional Board's duty is to protect water quality. Approving a landfill in Southern California next to a major river and valuable drinking water sources does not serve that mission. We urge the Board to disapprove this Tentative Order.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section:

Comment:

These specifications require implementation of a May 23, 2008, "Restoration and Enhancement Plan for Gregory Canyon Landfill." However, a subsequent plan titled "Habitat Restoration and Resource Management Plan for Gregory Canyon Landfill Property" dated

October 7, 2008, was submitted to the Regional Board. The October version is titled as the "Final Report" and appears to be an expanded version of the May plan. The Pala Band previously submitted comments on the October plan and they are attached to and incorporated into these comments. (Exhibit F). The Regional Board should clarify which plan would be required to be implemented. The same problem occurs in Provision H. 18. (TO at pg. 41).

We note that the October Plan proposes to offset impacts that would be caused by the proposed landfill by "mimic[ing] the area's natural state as depicted in the 1928 aerial photo." (October Plan at pg. 3-1). But restoring the site to its 1928 condition of "open alluvial scrub, with oaks and possibly sycamores dispersed sparsely throughout" (the so-called "natural habitat") ignores the fact that in 1928 there was no landfill located adjacent to the area, and the surrounding areas were essentially undeveloped. Given the existing situation and the destruction of riparian habitat in Gregory Canyon that would occur if the proposed landfill is approved, the goal of any mitigation must be to provide habitat that is better than the habitat that existed in 1928 and which will offset the impacts of the proposed project.

In addition, the Regional Board should reject the discharger's proposal that it be allowed to phase the creation/restoration of mitigation measures to "match the phased construction of the landfill." (October Plan at pg. 3-2). Our understanding is that almost all construction would be completed within the first four years, so the timing of the impacts would be similar to those for a large construction project where phasing is not allowed. Moreover, even impacts from the first construction phase would be felt throughout the Gregory Canyon area not only in those areas that may not have been physically excavated or scraped. Wildlife corridors and habitat will be disrupted due to construction activity, blasting and the generally high levels of noise that would be generated. Consequently, the WDRs should require that all mitigation measures be installed within the first year. No additional "phasing" should be allowed. The requirement in the Tentative Order that the proposed mitigation (implementation of the Restoration and Enhancement Plan) commence before the initial discharge and be completed within nine months of that discharge is proper. (TO at pg. 42).

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section:

Comment:

These comments are submitted on behalf of the Pala Band of Mission Indians ("Pala Band") to express their strong opposition to the issuance of Waste Discharge Requirements ("WDRs") and a Clean Water Act Section 401 certification for the proposed Gregory Canyon Landfill as proposed in the Tentative Order. As discussed below, issuing WDRs and other approvals would violate the Regional Water Quality Control Board's statutory duty to protect water quality because the proposed landfill as designed fails to meet regulatory requirements. More importantly, issuing WDRs would violate that duty because the proposed landfill would be located over a fractured bedrock aquifer that is hydrologically linked with aquifers that provide significant sources of drinking water to thousands of people, including the City of Oceanside, and on the banks of the San Luis Rey River. The location alone always has made Gregory Canyon the wrong place to construct and operate a landfill, and no engineering fix can remove

the serious threats to water quality that the proposed landfill at this site would pose. The Regional Board must reject this seriously misguided proposal.

The Regional Board need look no further than the Technical Analysis prepared by Regional Board staff to support the Tentative Order to see why this is not the proper location for a landfill and why consideration of the Tentative Order is not appropriate. As discussed in greater detail below, the Technical Analysis acknowledges the significant problems inherent in siting a municipal solid waste landfill over a fractured bedrock aquifer. Critically, the Technical Analysis acknowledges that the fractured bedrock aquifer system at this site has not been adequately characterized, meaning that the existing point-of-compliance groundwater monitoring system is not adequate to ensure that inevitable leaks from the proposed landfill would be detected.

But rather than requiring that this critical deficiency be resolved before WDRs are issued, the Tentative Order simply allows Gregory Canyon, Ltd. ("discharger") to submit a plan in the future to address this serious failing. That cart-before-the-horse attitude is not protective of groundwater quality, and ignores the requirements of federal and state laws that an adequate groundwater monitoring system be in place before approval. The fact that, after all these years, an adequate groundwater detection monitoring system still has not been installed raises serious questions about whether one ever could be installed. That concern alone should have been sufficient for staff to demand that the discharger conduct additional investigation to resolve these issues before staff even issued the Tentative Order.

The question of whether an adequate groundwater monitoring system ever could be installed in the fractured bedrock aquifer is even more troubling in light of the fact that significant blasting of bedrock would be required for construction of the proposed landfill. As described in the October 2008 Annual Emissions Inventory ("AIE") submitted by the discharger to the San Diego Air Pollution Control District ("APCD"), 40% of the material proposed to be excavated for the proposed landfill footprint would be "hard rock" that would require "drilling and blasting." (See Exhibit A, Letter to Chairman Bud Lewis, San Diego County Water Authority, Exhibit 2 at pg. 49). The AIE estimated that nearly 800,000 tons of material would have to be blasted, with up to 88 blasts required each year. {Id, at pgs. 50-51). Single blasts could consist of up to eight tons of a mixture of ammonium nitrate and fuel oil ("ANFO") and would be designed to impact an area of up to 0.5 acres or approximately 650,000 cubic feet of material. {Id. At pgs. 49-50.)

Even so, neither the Tentative Order nor the Technical Analysis mention that this blasting would occur, and the Regional Board has not required the discharger to determine what effects the blasting would have on the existing fractured bedrock system. Such significant and regular blasting could alter the fracture system, opening new fissures that would make any existing monitoring system even more inadequate. The San Diego County Water Authority also has expressed its concerns that this blasting could damage the San Diego Aqueduct pipelines which run next to the proposed landfill footprint and through a 150-foot deep pit proposed to be mined at the site. Such critical uncertainties make consideration of the Tentative Order premature.

As the Regional Board is aware, an adequate groundwater monitoring system would serve as an early warning system to detect the inevitable leak from the proposed landfill, and an undetected leak would cause serious environmental harm. But even with that acknowledgement, the Tentative Order never even mentions the fact that the discharger has

proposed to continuously pump groundwater from seven of these point-of compliance groundwater monitoring wells and to use the pumped water on the site for dust control, irrigation of sensitive habitat, and other purposes. Although the Pala Band and others repeatedly have expressed their concern with the proposal to pump these groundwater monitoring wells, the Regional Board has never responded to those concerns. {See, e.g., Exhibit B, letters dated August 2, 2006, August 10, 2006 and December 27, 2007). For example, the Regional Board has not required the discharger to analyze if continuously pumping groundwater would further reduce the adequacy of this already-suspect groundwater monitoring system.

Even worse, although the inevitable leak from the proposed landfill would contaminate the groundwater that would be pumped continuously through these monitoring wells and then used on site, the WDRs do not require continuous sampling of the pumped groundwater or impose any additional sampling requirements. Rather, the WDRs still would require sampling and analysis only for a limited number of contaminants of concern ("COCs") on a quarterly basis and for most COCs only every five years. In the best-case scenario, that means that contaminated water pumped from these groundwater monitoring wells would be used on site for three months, but most likely for much longer than that. Use of this contaminated water in sensitive areas of the proposed landfill would have serious environmental consequences.

Given that use of contaminated groundwater would cause serious environmental impacts and would violate state law, the failure to even mention the issue in the Tentative Order and the Technical Analysis is troubling. We note that the Revised Final Environmental Impact Report for the proposed landfill ("RFEIR") also failed to address this issue, a fact which contradicts the Regional Board's claim that the water quality impacts of the proposed landfill have been adequately analyzed under the California Environmental Quality Act ("CEQA"). The Regional Board's inaction on this issue is puzzling given that this is the first instance that we are aware of where a Regional Board would be approving the use of a landfill's point-of-compliance groundwater monitoring wells as water-production wells for operation of the landfill.

Also puzzling was staff's reaction when it was pointed out that samples collected by the discharger from the on-site groundwater monitoring wells in 2006 showed concentrations of the toxic chemical methylene chloride far in excess of its federal and state maximum contaminant levels ("MCLs"). (Exhibit B, Letter dated December 27, 2007), Data collected in 2006 and 2007 and submitted to the Regional Board also showed the presence of antimony in groundwater samples from a number of wells at concentrations that significantly exceeded its MCLs. These data highlight the significant risks of using pumped groundwater on the site. We do not feel that the issues raised by that data were ever resolved, but our understanding is that the Regional Board did not require the discharger to sample these groundwater monitoring wells in 2008.

Consideration of the Tentative Order is premature as well because the discharger has not identified a source of water for the proposed landfill, other than these groundwater monitoring wells. (The RFEIR admits that pumping those wells will not provide sufficient water for the construction and operation of the proposed project.) The discharger originally had stated it would purchase recycled water from the Olivenhain Municipal Water District ("OMWD") and truck the water 30 miles for use on the site. However, OMWD has informed the discharger that it will not provide recycled water for the proposed landfill. (Exhibit C). Because water from

OMWD was the primary source of water for the proposed project identified in the RFEIR, that document is no longer valid under CEQA.

Not only would locating a landfill in Gregory Canyon threaten precious water supplies and significantly impact critical habitat for a number of endangered species, it also would desecrate sacred religious and cultural sites. As the letters attached as Exhibit D and submitted separately attest, the Luiseno Indians, including members of the Pala Band, strongly and personally oppose the proposal to dump 30 million tons of garbage on the side of Gregory Mountain (Chokla) and next to Medicine Rock, two sites considered sacred by Luiseno Indians. As eloquently stated in one of the letters, those sites and the San Luis Rey River "form a spiritual nexus, a place of cultural and religious significance that cannot be overstated" and to allow their desecration would be to allow "the desecration of the spiritual heart of a people with a long history of suffering and inequality." In considering whether to approve the WDRs that are necessary for the proposed landfill to be built, the Regional Board cannot simply ignore these valid and deep spiritual and cultural beliefs.

The fact that the Regional Board is even considering a permit to construct and operate a landfill next to a major river and the San Diego Aqueduct and above a fractured bedrock aquifer that is hydrogeologically linked with important drinking water aquifers is astounding. In balancing the risks and benefits of the proposed landfill, the need to protect drinking water supplies clearly outweighs the claimed need for another solid waste landfill. Proposed expansions of landfill capacity in the County and likely legislative actions that will severely restrict the disposal of waste make the proposed landfill unnecessary. If another landfill was needed in 1994 (which has never been borne out) it is not needed now. The Regional Board's duty is to protect water quality. For all the reasons discussed above and in detail below, the Tentative Order should not be approved.¹ (1 In addition to these comments and the documents submitted with these comments, these comments incorporate by reference all CEQA documents, all documents submitted to the Regional Board by the discharger or the Pala Band and their respective consultants, attorneys, or representatives, and all correspondence from the Regional Board to any person or entity regarding the proposed landfill or the issues addressed in this Tentative Order or the JTD).

The Pala Band and numerous other groups and individuals have vigorously opposed the construction of this proposed landfill for years. While the Regional Board has successfully forced the discharger to improve the design of the proposed project, the problem remains that any landfill at the Gregory Canyon site would pose an unacceptable risk to water resources that supply thousands of people along the length of the San Luis Rey River. A site above a fractured bedrock aquifer on the banks of a major river is the wrong location for a landfill, and no amount of engineering can change that fact. While there are many other options for disposing trash, there are few options for obtaining secure water sources. Given the Regional Board's obligation to protect water sources, the choice it has is simple: WDRs should not be issued for the proposed landfill.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section:

Comment:

Also, another nothing in the technical analysis or in the Order, dealing with the issue of pumping groundwater from these point of compliance monitoring wells for use on the project site. This water is going to be used for dust control and for habitat mitigation, and yet there's no mention of that.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section:

Comment:

Similarly, there's no mention really of the landfill gas monitoring system. There's passing reference to it. There's no indication that the applicant is required to install the system that's described in the JTD.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section:

Comment:

The last thing I want to say is that even though the groundwater monitoring system is not considered to be adequate, the Order would allow the proposed landfill to accept sewage sludge, treated waste wood, and contaminated soils containing heavy metals such as arsenic, cadmium, lead, mercury, pesticides, TCE, PCE, vinyl chloride, and other solvents, as long as these are not considered hazardous waste. Not only can it accept it, but as I read the Order, it allows them to be used as cover material. I don't know how the landfill is going to be able to monitor - to determine that loads of soil coming into the landfill are not contaminated to a hazardous waste point.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section:

Comment:

The RPDEIR indicates that treated wastewater produced by the Olivenhain Municipal Water District ("OMWD") will be trucked to Gregory Canyon use in construction and operation of the proposed landfill. While we understand that OMWD has been issued a Master Reclamation Permit (Order No. R9-2003-0007) (the "MRP"), the RMP states that it is to allow the "discharge a blend of effluent and imported potable water for landscape irrigation purposes within the 4-S Ranch development," an area that does not include Gregory Canyon. The MRP specifically prohibits the discharge of treated wastewater to those lands not identified in the Report of Waste Discharge and for which "valid waste discharge requirements are not in force." This means that the discharge is not authorized at this point. In addition, the fact that the JTD does not discuss the use of treated wastewater for operations and in construction of the proposed landfill liner, is another reason that the JTD must be revised.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section:**Comment:**

We would appreciate it if you could clarify whether the changes to the project identified in that document have been submitted as part of a revised JTD and if not, whether the Regional Board will require additional information related to these issues as part of the waste discharge requirements ("WDRs") process.

We also would like to confirm the claims made in the RPDEIR that (1) the Regional Board has approved the use of treated wastewater for construction, dust control and other operations at the proposed landfill site, (2) additional permitting for using treated wastewater at the proposed landfill site will not be required, and (3) only a waiver of WDRs must be issued to the Olivenhain Municipal Water District ("OMWD") for the use of the treated wastewater at the proposed landfill. (RPDEIR at 4.15-3). Given the potential for the treated wastewater to be discharged into tributary waters of the San Luis Rey River, a source of drinking water, any use of treated wastewater without an NPDES permit would appear to violate the waste discharge prohibitions in the Basin Plan. Because your e-mail indicates that the Regional Board may not even comment on the RPDEIR ("If the Regional Board staff adopts comments . . . ") . We would request that the Regional Board confirm whether these claims are valid, and if the Regional Board has agreed to approve the use of the treated wastewater at the site without requiring that Gregory Canyon, Ltd. obtain a permit.

We would hope that, as a responsible agency under CEQA, the Regional Board submits comments on the RPDEIR. However, our concerns are more specific to the Regional Board's role as a water-quality protection and permitting agency, and we request a response on these issues separate from any comments that the Regional Board may submit on the RPDEIR.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section:**Comment:**

The "Water Quality Monitoring Report, Annual 2006" for the proposed Gregory Canyon Landfill submitted by GeoLogic Associates to the Regional Board in April of 2007 ("2007 Report") indicates that methylene chloride (dichloromethane) is present in groundwater in the fractured bedrock aquifer below the proposed landfill in concentrations as high as 410 micrograms per liter ("ug/l"). That sample and a number of other groundwater samples from other groundwater monitoring wells at the site contained concentrations of methylene chloride that are significantly higher than the federal and state maximum contaminant level ("MCL") of five (5) micrograms per liter ("ug/l"). Methylene chloride also is a listed hazardous waste under the federal Resource Conservation and Recovery Act and under California law, so the presence of any detectable levels of the contaminant makes the water a hazardous waste as well.

The data from the 2007 Report appear to indicate that a plume of methylene chloride underlies the entire Gregory Canyon area. GeoLogic attempted to dismiss these data by claiming in the 2007 Report that (1) "[d]uring the 2006 monitoring year, the water quality data does not

suggest the presence of measurable organic compounds (i.e., VOCs, SVOCs, pesticides, herbicides, and PCBs) in wells at the GCLF site," and (2) even though the presence of methylene chloride in wells GLA-4 and GLA-5 "was confirmed in retest samples," the concentrations "have steadily decreased" in those wells. However, that explanation is inadequate and misleading.

First, the explanation ignores data in the 2007 Report that clearly show the presence in the groundwater of (1) VOCs, such as methylene chloride, sometimes at very high concentrations, and (2) of various pesticides and herbicides in other samples. Second, the explanation ignores the fact that methylene chloride was detected during a number of sampling events at concentrations in excess of the MCLs in a number of other monitoring wells (e.g., GLA-D, GLA-E, GLA-F, GLA-G, and GMW-1). These wells are downgradient of wells GLA-4 and GLA-5, and are located at the mouth of Gregory Canyon next to the San Luis Rey River. The enclosed maps from the 2007 Report show the entire groundwater monitoring well system and a blown-up section of the area at the mouth of the canyon near the San Luis Rey River. The enclosed chart reflects the sampling data from the 2007 Report.

The 2007 Report also did not (1) explain the reason for the alleged decrease in the concentrations of methylene chloride, (2) identify the source of the methylene chloride, or (3) address the fact that the high concentrations of methylene chloride in the upgradient monitoring wells (GLA-4 and GLA-5) ultimately will impact the fractured bedrock aquifer downgradient, and the Pala Basin alluvial aquifer. Although we have submitted two Public Records Act requests to the Regional Board to obtain any subsequent sampling data for the site or any correspondence from the Regional Board regarding this issue, we have been informed that there is no new sampling data or correspondence to review.

The unexplained appearance and alleged "disappearance" of the methylene chloride in the fractured bedrock aquifer also raises serious questions regarding (1) the proposal to use seven of the fractured-bedrock-aquifer monitoring wells, including at least two wells in which methylene chloride has been detected above the MCLs (GMW-1, GLA-G), as water-production wells to pump water for use on the site; (2) the ability of the proposed groundwater monitoring system to properly monitor groundwater contamination in the fractured bedrock aquifer; and (3) the siting of the proposed landfill itself. We believe that the issues raised by the proposal to use these groundwater monitoring wells as water-production wells and by the presence of methylene chloride in the groundwater on site must be resolved before the Regional Board considers draft waste discharge requirements ("WDRs") for the proposed landfill any further.

The Regional Board Should Not Allow the Groundwater Monitoring Wells at the Proposed Landfill Site to Be Used to Pump Water For Use on the Site.

In a previous letter to Mr. Odermatt, Senior Engineering Geologist for the Regional Board, dated August 2, 2006, a copy of which is enclosed for your convenience, we raised concerns about the proposal to use seven groundwater monitoring wells to pump nearly 40 acre feet per year ("AFY") of groundwater (approximately 13 million gallons/year) for use on the proposed landfill site. Our concern with this proposal was based, in part, on the fact that groundwater monitoring wells at landfills generally are dedicated to monitoring possible landfill leaks, not to produce water for use. Indeed, we are not aware of any landfills in the country where groundwater monitoring wells also are used as water-production wells.

We also noted in that letter that, even though the use of groundwater monitoring wells as water-production wells was proposed after the Regional Board declared the Joint Technical Document ("JTD") for the proposed landfill to be complete, the JTD was not subsequently revised to provide a discussion of (1) the proposed groundwater pumping regimes, (2) the potential impacts of constantly pumping these wells on groundwater flows in the fractured bedrock aquifer, or (3) the potential that using monitoring wells to pump water would interfere with the ability of the groundwater monitoring system to monitor for landfill leaks. The enclosed form e-mail from Mr. Odermatt was the only response we ever received to that letter. Our August 11, 2006, letter in response to Mr. Odermatt's e-mail also is enclosed.

Not only does the JTD not address any of these issues, but it also does not include a sampling and analysis plan for testing the pumped groundwater before use. The JTD still states that the groundwater monitoring wells will be sampled quarterly and that the samples will be analyzed for the Appendix I constituents of concern ("COCs") identified in federal regulations, 40 C.F.R. Part 258; see JTD, App. G, p.24, and that groundwater samples will be analyzed for the more-inclusive list of COCs in Part 258, Appendix II, every five years. Id.

Given this sampling frequency, if the liner leaks and contaminates the fractured bedrock aquifer, the contaminated groundwater will be pumped and used at the proposed landfill site for at least three months (for Appendix I COCs) or for five years (for Appendix II COCs) between

sampling events. The impact of using groundwater pumped from these wells on the site would be significant given that the Local Enforcement Agency which permits the proposed landfill has acknowledged in the Revised Final Environmental Impact Report ("RFEIR") that the pumped groundwater would be used in the most-sensitive areas of the proposed project, such as in the habitat-creation areas in or near the San Luis Rey River. Given the possibility that contaminated water could be discharged into waters of the United States and waters of the State, these

groundwater monitoring wells should not be used as water-production wells without a significant change in the sampling frequency and in the scope of COCs to be analyzed before the water is used anywhere.

The Presence of Methylene Chloride in the Groundwater Raises Other Issues.

The problems created by allowing the use of the groundwater monitoring wells as water production wells would exist even if methylene chloride was not present in the groundwater. However, the presence of that contaminant in the groundwater both highlights the serious environmental impacts that would be caused by allowing pumped groundwater to be used on the site, and raises separate issues as well.

First, because methylene chloride is a "listed" waste under federal and state hazardous waste laws, any pumped groundwater must be managed as a hazardous waste under the "contained-in policy." Simply put, the discharge, disposal, or use of groundwater containing methylene chloride constitutes the illegal disposal of a hazardous waste under federal and state laws. Not only would these hazardous waste laws be violated, but discharging groundwater contaminated with methylene chloride also would violate the San Diego Basin Plan as well as Proposition 65.

Second, the alleged "disappearance" of the methylene chloride raises questions regarding the ability of the proposed groundwater monitoring system to track contaminants that could leak

from the landfill. The methylene chloride may have "disappeared" by migrating around the groundwater monitoring system into the alluvial aquifer or into some part of the fractured bedrock aquifer that is not being sampled. The fact that the methylene chloride has gone "missing" means that the groundwater monitoring system has failed its first real-world test.

Finally, the presence of methylene chloride in the groundwater also raises serious questions about siting a landfill in Gregory Canyon at all. We are not aware of any situation where a landfill has been constructed in an area of known groundwater contamination. Where groundwater contamination is detected, the Regional Board generally requires the owner or operator to identify the source of the contamination, characterize the extent of the contamination, and remediate the contamination. That has not been required yet.

We believe that the issues raised in this letter demand serious review by all agencies involved. However, it is incumbent upon the Regional Board to cease processing WDRs until it has determined (1) what impacts would be caused by using the groundwater monitoring wells as water-production wells, and (2) how to characterize and remediate the methylene chloride contamination at the proposed landfill site.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section:

Comment:

In considering whether to begin drafting WDRs, we ask the Regional Board to recognize the following empirical facts:

1. Placement of a Landfill over an aquifer and adjacent to a river creates a risk to the ground water and surface water.
2. This risk will last hundreds of years - as long as the garbage stays in the ground.
3. Absent the Landfill, these risks would not occur.
4. There is no way to completely eliminate the risk once the Landfill is built.
5. The entire exercise of the Regional Board developing WDRs involves the Regional Board calculating an acceptable probability that the surface waters and ground water will not be impacted by the project.

e believe there is an inherent congruity between the Regional Board's duty to protect the waters of the state, and the use of probability to meet that standard. This is particularly a concern when there are many many variables which the Regional Board must rely on as it formulates its probability. How certain is the Regional Board that it can come to any probability of failure, let alone an acceptable risk of failure?

As the Regional Board is aware, the Pala Band and numerous other groups and individuals strongly oppose the construction of the proposed Landfill. While we appreciate the continued efforts of the Regional Board in reviewing documents submitted for the proposed Landfill, we believe that any landfill at the Gregory Canyon site would pose an unacceptable risk to water resources, including drinking water supplies, throughout the entire length San Luis Rey River basin. Although the applicant has redesigned the Landfill in response to the demands of the Regional Board, the basic problem remains: Gregory Canyon, located above a fractured bedrock aquifer on the banks of the San Luis Rey River, is the wrong place to locate any

landfill. The problem is simple: bad location, location, location, and no amount of engineering can alter that fact.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section:

Comment:

Because the Applicant Still Has Not Identified the Source of Water for the Project, the Regional Board Cannot Assess Whether Obtaining the Needed Water By Pumping on the Project Site Could Impact the Groundwater Monitoring System or Accelerate the Migration of Contamination.

Our previous comments in May of 2004 noted that the applicant had not identified the source of water that would be used to construct and operate the proposed Landfill. The form application submitted with the JTD stated only that "individual wells" would be the source of water supply. However, the JTD still does not identify the location of these "individual wells."

27 CCR. section 21750(h)(3) requires that the JTD include information on all water wells within the facility boundary and within one mile of the facility boundary, including information on the construction of the wells and the uses of those wells. In addition, 27 CCR. section 21750(h)(5) requires that the JTD provide information on the "[c]urrent and estimated future use of ground water within one mile of the facility perimeter." The intent of these rules issued by the State Water Resources Control Board ("SWRCB") was to ensure that the applicant supplied each Regional Board with information regarding the potential impacts to wells in the area of a proposed landfill and to determine if operation of those wells could impact the landfill facilities.

The JTD acknowledges that up to 194 acre feet of water per year ("afy") will be needed for the Landfill. However, the JTD does not identify the location of any wells within the boundaries of the facility or within one mile of its perimeter, that would be used to supply water to the project. The California Environmental Quality Act ("CEQA") Findings of the San Diego Department of Environmental Health stated that either wells in the alluvial aquifer or within the fractured bedrock aquifer could be used to supply water for the project. In addition, in court filings in the case challenging the FEIR's analysis of this issue, the San Diego Department of Environmental Health ("DEH") has argued that 400 afy of water would be available from the 20 bedrock aquifer wells on the site.

The fact that the DEH and the applicant claim that 400 acre feet of water will be pumped yearly from the bedrock aquifer, but that the Regional Board has not required that the applicant evaluate the impacts of pumping that amount of water from these wells or from wells in the alluvial aquifer is troubling, and violates 27 CCR. section 21750(h). Pumping groundwater from the bedrock aquifer (and possibly from the alluvial aquifer) clearly would impact the flow of groundwater in the fractured bedrock aquifer system in which the groundwater protection monitoring well system is proposed to be located. Those impacts have never been assessed by the applicant or the Regional Board.

Not only could such pumping of groundwater compromise the effectiveness of the groundwater monitoring system, but the groundwater pumping also could accelerate the rate that contamination from the Landfill will migrate in either the bedrock or the alluvial aquifers. The groundwater contamination modeling included in the JTD failed to address the impacts that

could be caused by pumping on-site production wells because the location of those production wells was never identified. Without information on the location of these wells, the Regional Board cannot determine if the proposed groundwater monitoring system is adequate, and cannot rely on the groundwater modeling. In addition, the Regional Board cannot estimate the fate of potential migration into the surrounding ground water.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section:

Comment:

The JTD Does Not Include Sufficient Detail to Allow the Regional Board to Issue WDRs.

27 CCR. section 21760(a) requires that a JTD include "detailed preliminary" plans, specifications and descriptions for all (1) liners, (2) other containment structures, such as the final cover, (3) the leachate collection and removal system components, (4) the leak detection system components, (5) precipitation and drainage control facilities, (6) interim cover, and (7) ground water and unsaturated zone monitoring systems plans and rationale. Although our previous comments identified numerous portions of the JTD which relied on "conceptual designs" for the project elements, and failed to include sufficient detail to ensure that waters of the state would be adequately protected, the final JTD did not include any additional information that addressed those issues.

In addition to these regulatory requirements, the complexity and sensitivity of the Landfill site demands that sufficient detail be provided before draft WDRs are issued. The WDRs must be based on the information contained in the JTD, and the WDRs should require that the applicant actually construct the elements and facilities as they are described in the JTD. Indeed, the solid waste facility permit issued by DEH requires compliance with the JTD. However, because the facility designs in the JTD are merely "conceptual designs," draft WDRs are premature. No assurance is provided in the JTD that the conceptual level design will not be compromised because of unforeseen costs that would have been identified in a feasibility-level design. In addition, the Regional Board cannot determine that the WDR's are adequate to ensure protection of water resources if it does not have adequate and reliable detail regarding the project.

III. The Data in the JTD Are Inadequate to Identify the Highest Anticipated Groundwater Level For Purposes of Determining the Allowable Depth of the Landfill Excavations.

The JTD states that, in constructing the Landfill, the "bottom subgrade will be a minimum of five feet above the highest anticipated groundwater level." (JTD at C 1.1). As shown on Figure 14 of the JTD, the "bottom subgrade" would be located below the proposed subdrain system. However, the JTD does not contain sufficient data to identify the "highest anticipated groundwater level" above which the Landfill would be constructed. Despite our previous comments to the Regional Board raising this issue over one year ago, the Applicant has taken no action to gain additional data regarding the ground water level.

The first problem is that there are not enough wells in the area where the majority of the Landfill footprint is proposed to be located to properly determine the existing piezometric level

of the groundwater, let alone the highest anticipated groundwater level. The JTD acknowledges

that "the vigorous development of riparian vegetation along the thalweg of the canyon, and its tributaries, suggest that the piezometric level of the underlying aquifer is close to the surface along the lowest points of the canyon." (JTD at D.5.1.2). Even so, only well GLA-8 is located along the thalweg of the canyon in the area where the main part of the Landfill footprint is proposed to be excavated. (See Figure 2 of the October 2004 Supplemental Hydrogeologic Investigation Report). The only other well even remotely within this area is Well GLA-9, located west of the Landfill footprint, and that well always has been dry. Well GLA-5 is at the very top of the canyon, and Well GLA-4 also is outside the proposed Landfill footprint. A single well clearly is not representative of conditions within the bottom area of the proposed Landfill, and does not provide sufficient data to delineate the assumed piezometric contours drawn on Figure 2-3B of Appendix C.

This limited data is further compromised by the fact that most of the data was collected during a period of low-rainfall years. Because the proposed Landfill would remain at the site forever, there is insufficient information to ensure that the highest anticipated groundwater level has been properly identified. As discussed above, additional wells are needed to better define this groundwater level in the main portions of the proposed footprint and in the areas where a large amount of the excavation would occur. At the least, given the amount of rainfall during the past

year, additional data must be collected from the existing monitoring wells to update the previous data. In fact, given the acknowledged near-surface ground water in the thalweg of the canyon during dry years, there is a strong likelihood that the ground water surfaces as springs within the canyon during wet years.

Determining the highest anticipated groundwater level is needed to define the depth of the allowable excavation for the proposed Landfill. Only after the allowable depth of the excavation is known can the amount of available cover material be calculated. Once adequate additional data is collected to better define this groundwater level, the Regional Board should require that the applicant provide a drawing identifying the highest anticipated groundwater level in relation to the proposed depth of excavation for each phase of the Landfill construction. At this time it is impossible to determine if the proposed depths of the phased excavations meet this requirement, or even if any excavation can occur.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section:

Comment:

IV. The JTD Does Not Contain the Required Seismic Analysis of the Proposed Leachate, Drainage and Gas Control Facilities.

27 CCR section 20370 requires that all Class III disposal units be designed to withstand the maximum probable earthquake ("MPE") "without damage to the foundation or to structures which control leachate, surface drainage, or erosion, or gas." While the JTD states that a seismic

analysis was completed for the maximum credible earthquake ("MCE"), the JTD only contains the slope stability analysis contained in Appendix C. However, that analysis does not address how the design of the leachate, drainage-control or gas-control features will ensure that those features can withstand either an MPE or an MCE earthquake as required by the SWRCB rules. These features could fail in such an earthquake, even if there was not a slope failure. Without this information, the Regional Board has no evidence that the proposed Landfill would meet these regulatory requirements.

The lack of a seismic analysis on these features is just another example of why greater design and construction detail is needed for the proposed Landfill. One glaring example of this deficiency is the perimeter storm drain ("PSD") channels. These PSD channels are proposed to control drainage onto the proposed Landfill footprint and from within the "undisturbed" areas of the proposed Landfill footprint. As shown in the JTD, the eastern reach of the PSD channel is proposed to be built nearly 400 feet above the floor of Gregory Canyon along the steep, rugged slopes of Gregory Mountain. However, the JTD provides no detail as to the manner in which this PSD channel will be suspended above the canyon floor or its seismic stability.

There also is no discussion in the JTD regarding how the eastern perimeter channel will be designed to ensure that it is not damaged by potential debris flows or by boulders falling down from the side of the mountain during a seismic event or otherwise. The JTD admits that "there is clear evidence that rock falls have occurred at the site" and concludes that "construction of a 'catching' wall or other diversion structure near the edge of the landfill is recommended to effectively mitigate the risk of rock fragments rolling onto the landfill." (JTD at D.4.7). But, there is no analysis of the impact of these expected rock falls on the integrity of the eastern PSD channel.

Because there are no details on the construction of the PSD channels, the Regional Board cannot determine if they will be constructed to meet the seismic standards or to be serviceable during the lifetime of the proposed Landfill. Similarly, the lack of a seismic analysis for the gascontrol and the leachate-control systems means that the Regional Board cannot determine if these systems will be designed and constructed to meet regulatory standards. Without this information, the JTD is incomplete and the drafting of WDRs premature.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section:

Comment:

VI. The Design of the Leachate Control and Recovery System Does Not Meet State Standards.

The SWRCB rules regulating leachate collection and removal systems ("LCRS") require, among other things, that (1) the systems be "designed, constructed, maintained, and operated to collect and remove twice the maximum anticipated daily volume of leachate" and (2) the Regional Board "specify design and operating conditions in the WDRs to ensure that there is

no buildup of hydraulic head on the liner." (27 CCR. § 20340 (b)-(c)). The JTD claims that the LCRS system for the proposed Landfill was designed to meet the first requirement, but also states that the design will "maintain less than a 30-cm (12-inch) depth of leachate over the composite liner system." (JTD at B.5.1.1.2).

First, we question the basis for the applicant's claim that the LCRS has been designed to collect and remove twice the maximum anticipated daily volume of leachate as required by rule. The applicant has relied on modeling using the "HELP3" computer program to estimate the amount of leachate that could be generated at the Landfill. Those modeling results, unlike the conclusory statements in the JTD that the system has been designed to meet SWRCB rules, have only been recently released, and remain under review. However, the lack of adequate drainage controls on the site, as discussed above, raise serious questions about the assumptions used to estimate leachate generation.

In addition, the JTD's acknowledgement that the LCRS design will "maintain less than a 30-cm (12-inch) depth of leachate over the composite liner system" directly violates the SWRCB requirement that the design of the LCRS "ensure that there is no buildup of hydraulic head on the liner." The language of the rule seems to be quite clear, and we question why the Regional Board has approved an LCRS design that does not meet that requirement.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section:

Comment:

VII. The Analysis of the Potential Impairment to Ground Water From a Release From the Landfill Is Inadequate.

The groundwater contaminant migration modeling completed 10 years ago concluded that contamination from the leaking Landfill would spread to the alluvial aquifer. However, the groundwater modeling was conducted using groundwater flows under assumed "existing" conditions (though, as stated previously, these were not fully characterized) and with a "worst-case leakage to the liner of about 10 gallons per day per acre" or 1850 gallons per day ("gpd") (JTD at B.5.1.1.4). However, the JTD estimates that the peak leachate production rate would be 1,236 cubic feet per day or 9,245 gpd, an amount far greater than the amount used in the modeling. While we believe that the applicant has underestimated the maximum amount of leachate that would be generated in the Landfill, using a figure that is only 20% of the claimed greatest leachate generation rate raises significant questions about the validity of the contaminant migration modeling. A higher rate of leakage could occur if there was a significant failure in the LCRS or the liner.

Moreover, since the modeling was conducted more information has been obtained on the hydrogeologic properties of the bedrock and alluvial aquifers. Because the 10-year old modeling report in Appendix C provides no information on the other assumptions used in the model to reflect site-specific characteristics, additional, up-to-date modeling should be completed to provide a better estimate of the threat to ground water quality in both the alluvial and bedrock

aquifers under a real "worst case" scenario. Without this additional information and analysis, the Regional Board cannot reasonably begin drafting WDRs.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section:

Comment:

VIII. Sufficient Evidence of Adequate Financial Assurance is Lacking.

The applicant continues to rely on a "Trust Agreement" dated June 1, 2001, to demonstrate coverage for closure and post-closure maintenance costs. However, that Trust Agreement By rule, a "current" documentation of acceptable funding levels must be provided, (27 CCR. § 21570(f)(7)), and a four-year old trust agreement is not "current" documentation.

Perhaps more importantly, the Trust Agreement does not include the same costs for closure, post-closure, and corrective action identified in the JTD. For example, the Trust Agreement lists the cost of closure as \$15,567,055, of post-closure as \$8,094,150, and of corrective action as \$778,200, for a total of \$24,439,405. By contrast, the JTD lists these costs respectively as \$20,681,697 for closure (JTD at Table 17), \$8,219,910 for post-closure (JTD at Table 15), and \$4,833,316 for corrective action, (JTD at Table 8). This nine-million dollar difference cannot simply be ignored, and indicates that the applicant does not have a reliable estimate for the cost of corrective action should leaks occur.

Similarly, the JTD states that "any future corrective action program or capital improvement costs will be covered under a separate account maintained by Gregory Canyon Limited," (JTD at E.2.5.1), but no information is provided as to how this "separate account" will be maintained or funded or as to the extent to which it will be funded. 27 CCR. section 22221 requires that GCL demonstrate financial responsibility to the Integrated Waste Management Board "in at least" the cost of corrective action as "reviewed and approved by the appropriate RWQCB." This mere statement of a "separate account" does not satisfy that requirement.

Moreover, the proposed financial assurance for corrective action is based on the costs associated "with a release to the underlying bedrock " (JTD at B.5.1.7). Section B.5.1.6.4 states that the "'reasonably foreseeable' release to groundwater from the facility would involve leakage of landfill fluids or landfill gas from point defects in the landfill liner system into the underlying bedrock," but the magnitude of this "reasonably foreseeable" release is not identified, and it is not clear if the estimated mitigation costs even include remediation of alluvial ground water. Because it is difficult to evaluate whether the projected costs are realistic for a reasonably foreseeable scenario, this analysis needs to be augmented before WDRs can be drafted.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section:

Comment:

GCL still has not indicated where it will obtain the water necessary to construct and operate the proposed landfill. Because GCL does not have a permit to pump water from the Pala Basin aquifer or to divert surface water from the San Luis Rey River, and does not have the right to use "riparian" water from the Pala Basin or from the San Luis Rey River on those portions of the landfill where the water will mainly be used, it appears that the only on-site source of water is the fractured bedrock aquifer. The CEQA Findings prepared by the LEA for the project state that there is "fractured bedrock on the project site that provides appreciable percolating groundwater." (CEQA Findings at B-10). But, even at the highest flow rate (20 gallons per minute) (FEIR pg. 4.3-8), this would require six to eight wells pumping 24 hours per day, 365 days per year to obtain the almost 200 acre feet per year of water needed.

Consequently, if water will be obtained from the bedrock aquifer, the Regional Board needs to know the location of those wells and their pumping regime to ensure that use of those production wells does not impact the ability of the proposed groundwater monitoring well system to detect any releases of contaminated leachate from the landfill, and does not exacerbate the migration of contaminants that have leaked from the proposed landfill. In addition, an analysis should be completed to ensure that the dewatering of the fractured bedrock aquifer would not affect the stability of the liner system once 60 billion pounds of garbage, plus the weight of the liner and the cover, is placed in the canyon on top of the fractured bedrock system.

Because the JTD does not include any discussion of any of the potential impacts from pumping groundwater from the bedrock aquifer for use on the landfill, the Regional Board should require that the JTD identify the location of the proposed production wells and evaluate the impacts of pumping from those wells. If water will not be pumped from the bedrock aquifer, the JTD should identify the source of a dependable supply of water for the landfill.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section:

Comment:

Our previous letter also questioned the lack of detail in the JTD. For example, there is no discussion regarding how the eastern perimeter storm drain channel would be constructed on the steep slope of Gregory Mountain, approximately 400 feet above the bottom of the canyon. If this channel is not properly constructed, its failure would eliminate the main defense against erosion or wash out of the disposed garbage.

In addition, the JTD states that the western portion of the perimeter storm drain channel will not be constructed until some unspecified time during the Phase II excavation/fill period. By that time, millions of tons of garbage would have been disposed in the landfill footprint. Even so, the JTD does not explain how stormwater run-on from the eastern and southern reaches of Gregory Canyon will be controlled during this period, especially during a 100-year, 24-hour, or larger, storm event.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section:

Comment:

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section:

Comment:

The technical analysis does not even consider the effects that blasting will have on this fractured bedrock aquifer. Up to 40% of the materials we excavate will need blasting. We're talking about up to 88 blasts a year, up to eight tons of ammonium nitrate and fuel oil, which was used to bring down the building in Oklahoma City, will be used to blast the landfill for construction. No analysis of the impacts on the fractures there.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section:

Comment:

As you are aware, a Tentative Order has been issued for the proposed Gregory Canyon landfill, and a hearing on the Tentative Order before the Regional Board has been scheduled for its regularly scheduled meeting on August 12, 2009. However, as a "responsible agency" under the California Environmental Quality Act ("CEQA"), the Regional Board cannot take any action on the Tentative Order without first adopting the environmental review for the proposed landfill conducted by the San Diego County Department of Environmental Health, acting as the local enforcement agency under state law ("LEA"). At this time, we do not believe that an adequate environmental review has been completed.

In 2006, San Diego Superior Court ruled that the Final Environmental Impact Report ("FEIR") prepared by the LEA for the proposed landfill was inadequate, and the Court ordered the LEA to conduct additional analysis under CEQA. In relevant part, the Superior Court determined that the FEIR had failed to identify an adequate source of water for the proposed project, and had failed to evaluate the impacts of obtaining that water.

In response, the LEA prepared a Revised FEIR that identified two sources of water for the proposed landfill. First, the RFEIR indicated that the proposed project would obtain water from the fractured bedrock aquifer on the site by pumping groundwater from the point-of-compliance (POC) groundwater monitoring wells installed to detect leaks from the landfill. Not only is it improper to use POC groundwater monitoring wells as water-production wells, but we are troubled by the fact that neither the Tentative Order nor the Technical Analysis for the Tentative Order discusses using these POC monitoring wells as water-production wells.

But these on-site POC groundwater monitoring wells would not be able to provide a sufficient quantity of water to construct and operate the proposed landfill, the RFEIR also stated that Gregory Canyon, Ltd. ("GCL") would purchase up to 193 acre-feet per year (approximately

63 million gallons per year) of treated wastewater from the Olivenhain Municipal Water District ("OMWD") pursuant to an agreement with OMWD. This water was to be trucked nearly 30 miles to the proposed landfill.

In January of 2009, however, the Fourth District Court of Appeals ruled that OMWD had violated CEQA when it approved the agreement to sell water to GCL without complying with CEQA. As noted on the enclosed print-out from the County of San Diego website, on May 13, 2009, the Board of Directors of OMWD voted not to sell water to GCL for use at the proposed landfill. Since the Board took that action, neither the LEA nor GCL has identified an alternative source of water for the proposed landfill. The County's web page admits that "the County will have to complete any necessary CEQA analysis" regarding any new source(s) of water.

Given this situation, it is our position that the RFEIR is invalid and will remain so unless and until the LEA identifies an adequate source of water for the proposed landfill, and analyzes the impacts of supplying that water. If a responsible agency were to rely on the existing RFEIR to support its discretionary actions, its actions could be challenged in court as being in violation of CEQA. Moreover, waste discharge requirements cannot be issued without some knowledge of the source of the water to be used. Consequently, we urge the Regional Board to stop processing the Tentative Order, to postpone the hearing on the Tentative Order scheduled for August, and to suspend and extend the time for submitting comments on the Tentative Order until a source of water has been identified and the LEA has complied with CEQA.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section:

Comment:

The revised draft partial environmental impact report ("RPDEIR") for the proposed Gregory Canyon Landfill, dated July 2006, states that Gregory Canyon, Ltd. ("GCL") will pump up to 43,5 acre feet per year of groundwater from existing bedrock wells to provide water for the construction and operation of the proposed landfill. The RPDEIR states that the proposed production wells (GMW-1, GLA-3, GLA-12, GLA-13, GLA-B, GLA-C and GLA-G) can produce a safe yield of 27 gallons per minute ("gpm") over the 60-year life of the proposed project, RPDEIR at pg. 4.15-9, 10.

While we question the validity of the claim that the bedrock groundwater system can provide the projected safe yield for 60 years or even less, the proposal to use wells previously identified as dedicated groundwater monitoring wells in the existing environmental impact report ("EIR"), which has not been changed, and the Joint Technical Document ("JTD") for the proposed landfill, constitutes a significant change in the proposed project. These changes raise serious questions about the adequacy of the hydrogeologic analysis in those two documents and about the adequacy of the proposed groundwater monitoring system itself.¹ (1 On page 16 of the "Supplemental Hydrogeologic Investigation Report" prepared by Bryan A. Stirrat and Associates, which was Appendix C-1 in the 2005 JTD, all of these wells were identified as groundwater monitoring wells, except well GLA-3, which was identified as a bedrock water level measuring station.) Neither of these documents discusses proposed groundwater pumping regimes, potential impacts on groundwater flow due to the use of these wells to produce water, potential interference with groundwater monitoring caused by groundwater pumping to produce water,

testing of the pumped water before reuse, and other hydrogeologic issues critical to ensuring that the proposed groundwater monitoring system is adequate to protect water resources.

The proposed changes require that the Regional Board require a better description of the proposed groundwater production system and additional hydrogeologic analysis in both the RPDEIR and the JTD before continuing to draft a tentative order. Given the proposed changes to the groundwater monitoring system, this will require additional groundwater modeling.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section:

Comment:

V. The JTD Does Not Contain Sufficient Information to Show That the Proposed Drainage-Control Facilities Meet the Regulatory Performance Standards.

The SWRCB rules contain specific performance standards for precipitation and drainage control at solid waste facilities, 27 CCR. section-20365, and compliance with these standards must be shown before the facility can receive authorization to discharge. Because the SWRCB rules specifically establish these standards, filing a Notice of Intent to comply with general construction or industrial stormwater permitting programs is not sufficient. As we have stated previously in comments, the JTD either admits that these performance standards will not be met or fails to provide sufficient information to show that they will be met.

A. The JTD Does Not Include Sufficient Evidence That the Drainage-Control Facilities Are Sized For a 100-Year, 24-Hour Storm Event

27 CCR. section 20365(c)(1), referring to Figure 4.1 of the SWRCB rules, requires that facilities for controlling drainage be designed to handle 100-year, 24-hour storm events. However, the JTD provides no calculations showing that the perimeter drainage pipes, which theoretically will be used to control runoff from "disturbed" areas of the Landfill, have been designed for this size storm event. In fact, the JTD acknowledges that the proposed desilting basins into which these perimeter drainage pipes will discharge have been designed to be efficient in a 10-year, six-hour rainfall event. (JTD at C.2.8.3.4). While the JTD claims that this size storm event "most closely models the average rainfall events that watersheds will experience, year after year," and thus "yields the best estimate of potential sediment deposits in a particular desilting basin on an annual basis," (id.) those arguments ignore the requirement of 27 CCR. section 20365 and Figure 4.1 that drainage facilities be designed to handle 100-year, 24-hour storm events. If the perimeter drainage pipes are sized for a 100-year, 24-hour event as required by the SWRCB rule, the desilting basins also must be sized for that storm event and their efficiency must be tested under that size event. If the perimeter drainage pipes are unable to handle such flows, what will happen to the drainage generated by a major storm event?

A related problem is that the JTD contains contradictory statements regarding what constitutes the "undisturbed" portions of the proposed Landfill footprint from which runoff would be directed to the perimeter drainage pipes. One section of the JTD states that "once an area of the landfill is completed and native vegetation reaches a state of 70 percent coverage" (based on pre-development conditions) the water will be directed to the PSD channels. (JTD at

C.2.8.3.5). However, the JTD also states that "once an area reaches 20 percent of pre-developed vegetative condition then storm water flows will be diverted" to the PSD channels. (JTD at C2.9.2.5 and C2.9.4.5).

While it is not clear why an area at 20% of pre-development vegetation could ever be considered "undisturbed," it is clear that an area with only 20% of pre-development vegetation would discharge more sediment to the river than the same area at the pre-development stage or in the 70% of pre-development stage. This internal inconsistency raises questions regarding the soil analysis for the proposed project and the calculations for sizing the desilting basins. Indeed, the soil loss analysis in the JTD determined that pre-development soil losses were greater than the post-closure soil losses, but the soil loss analysis was "based on a *closed landfill' condition." (JTD at E.1.7.2). The JTD does not contain an analysis of soil loss during the operations period, and never addressed the soil loss from 20 or 70 percent revegetation. Obviously, the lack of information raises serious questions about the rudimentary desilting basin sizing and efficiency calculations in the JTD. The obvious result is that exceedingly high amounts of amount of sediment would be discharged to the San Luis Rey River that would severely impact water quality in the river. Without clarification of this important issue, the Regional Board remains unable to draft tentative WDRs.

B. The JTD Does Not Provide Sufficient Information To Show That Drainage Will Be Adequately Controlled During All Phases of the Proposed Landfill's Operation.

The JTD states that only a portion of the eastern PSD channel will be constructed during the Phase I excavation and filling of the Landfill, and that construction of the western perimeter channel will only begin during the Phase II excavation, although the JTD does not specify a time during Phase II either. (JTD at C.2-17). If that is the case, then all drainage from the west, southern and southeastern flanks of Gregory Canyon would simply run on to the Landfill footprint during the initial disposal of three to four million of tons of waste.

Figures 21 and 21B of the JTD are the Phase I Fill Plan and Phase I Excavation Plan, respectively. In conflict with the text of the JTD, both Figures 21 and 21B appear to show a western PSD channel, although the text of the JTD does not mention this channel and provides no information on the size or construction details of the channel. Similarly, both drawings show two desilting basins and perimeter drainage pipes, even though the text of the JTD states that only one desilting basin (the eastern desilting basin?) would be constructed during Phase I. (Figure 21 actually shows three desilting basins.) Although both drawings show perimeter drainage pipes running to the two desilting basins, the text does not state when the perimeter drainage pipe system would be constructed or where water in those pipes would discharge prior to construction of the necessary desilting basins. As a result, this discharge is unaccounted for in the JTD.

Consequently, self-serving statements that "interim drainage and erosion control structures" would provide "continuous stormwater collection and conveyance in a controlled manner" (JTD at C.2.9.1) are not supported by evidence in the JTD. There is no discussion regarding how drainage will be controlled prior to the completion of the PSD channels or be collected or conveyed in a "controlled manner" with a single drainage channel located on the highest slope of the eastern side of the proposed Landfill footprint. Without drainage controls around the entire proposed Landfill footprint, water will simply flow in the natural drainage direction toward

the river both threatening to wash garbage into the river, and creating greater quantities of leachate than assumed in the JTD.

The lack of information on this crucial issue is both apparent and a violation of SWRCB rules. These issues were raised in our previous comments, but simply ignored. Without more detail regarding all these issues, the Regional Board has no way to ensure that the waters of the state would be protected if the proposed Landfill is constructed.

C. The JTD Does Not Provide Sufficient Information to Ensure That Adequate Drainage Controls Will Be Provided for the Stockpile/Borrow Areas.

The JTD acknowledges that drainage from the borrow/stockpile areas will "be discharged into the existing natural drainage courses," and claims that "[p]roper drainage will be maintained in the borrow stockpile areas" in accordance with the stormwater pollution prevention plan ("SWPPP"). (JTD at C.2.2.4). However, the JTD provides vague, general information regarding these claims. While the JTD states that erosion control measures will include desilting basins, down drains, and/or rip rap, there is no discussion regarding (1) where these features will be installed, (2) when they will be installed, or (3) if they will be in place for the "stockpiling" period only, or for the "borrow" period as well. There also is no description of the size or construction details of these features.

The discussion of drainage control for Borrow Area B is particularly deficient given that it would be 65 acres in size and 70 to 150 feet deep. (JTD at C2.2.3). The JTD again claims that "a desilting basin will be constructed" on the west end of the Borrow Area B, but it does not provide the location or dimensions of the desilting basin or any hydrologic analysis of expected flows. There also is no discussion of the number of down drains or other features that would be installed or the scheduling of this installation.

The JTD also does not provide enough information to ensure that the "pre-developed drainage conditions of the area will be maintained as closely as possible" or that "[d]ischarge rates will be equal to or less than natural flow conditions" as claimed. (JTD C.2.2.4). The JTD does not state what these "pre-developed flow conditions" are or identify the drainage in which they were measured. Indeed, the JTD does not ever identify the "natural drainage course" into which runoff from Borrow Area B will flow.

Again, SWRCB rules require that specific performance drainage-control criteria be met. In this case, neither the JTD nor the SWPPP, which contains no more information than the text of the JTD, provides sufficient information for the Regional Board to determine that these performance standards will be met.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: B.10

Comment:

This provision would require the discharger to monitor the subdrain system quarterly if leachate is detected in the secondary LCRS and to take

certain actions if it was to be determined that a release had occurred. The WDRs again fail to acknowledge that during this time contaminated groundwater would continue to be pumped and used on the site.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: B.11 and B.12

Comment:

These provisions address monitoring of the primary LCRS, which would occur only once annually. The provision does not make clear how the list of COCs would be developed, as it states that the discharger will continue to monitor for Appendix II constituents and MTBE "until a COC list for the WMU has been developed." The provision sets no time limit for developing the COC list (one year, two years of sampling?) and appears to allow any Appendix II constituent not detected in leachate to be deleted from the COC list and not analyzed for in future samples. That would mean a contaminant not on the COC list that might later be present in the leachate or in groundwater would not be detected. Allowing the discharger to create such a limited list of COCs would further increase the threat to water supplies posed by the proposed landfill and is not appropriate.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: B.4

Comment:

This provision requires the discharger to determine groundwater flow rate and direction in the monitoring wells quarterly. But, it is not clear how this can be done accurately when the wells are being pumped continuously. Without some analysis, there is no way to determine how the cone of influence of each of the wells is impacting groundwater flow rates and direction.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: B.6

Comment:

This provision requires the discharger to assess the wells for "the presence of a floating immiscible layer in all wells . . . at the beginning of each sampling event." Determining whether this immiscible layer exists will be impossible if the wells are continuously pumped. In fact, any contaminant that could cause an immiscible layer would have been pumped with the groundwater and spread on the site by the time a sampling event occurred.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: B.9

Comment:

If rainwater was to be detected in the secondary LCRS, it would indicate a leak in the system and would require an immediate response.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: C.1**Comment:**

This provision requires the discharger to comply with groundwater and surface water monitoring requirements specified in Title 27. But those rules require that the groundwater monitoring system include point-of-compliance and other monitoring wells that "allow for detection of a release from the Unit" and "provide the best assurance of the earliest possible detection of a release from the Unit." (27 CCR. § 20415(b)(1)(B)). As noted above and discussed in the Technical Analysis, the proposed system does not meet those standards. There are similar requirements for the surface water monitoring system that the Technical Analysis admits would not be satisfied by the proposed system. (27 CCR. § 20415(c). For that reason as well, WDRs cannot be issued.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: C.2**Comment:**

This provision implements the Water Quality Protection Standard requirements in the rules. (27 CCR. § 20390). Although it properly identifies certain conditions required by the rules, it allows the discharger to establish the limited list of COCs described under Provision B. 11 of the Detection Monitoring Program. That violates the rules.

The rules require that the Regional Board specify in the WDRs a list of COCs that includes "all waste constituents, reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in the Unit" (27 CCR. § 20395(a), with emphasis added). The rules also state that "the COC list shall include all constituents mandated under SWRCB Resolution No. 93-62." (27 CCR, § 20395(b)). There is sufficient data showing that all the contaminants on the Appendix II list are reasonably expected to be in municipal solid waste. The Appendix II list and the Resolution 93-62 list should be the baseline COC list, and any additional contaminants identified through the methods identified by the Regional Board should be added to that baseline list. The rules do not allow the COC list to be limited to contaminants detected in selected samples of leachate.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: C.3**Comment:**

Again, although the JTD specifically states "[leachate collected in the storage tanks will be transported off-site for treatment and disposal]" (JTD at pg. B.5-3), this provision allows collected leachate and landfill gas condensate to be disposed back into the landfill, with no conditions. Leachate can be a hazardous waste under federal and state laws, and this prohibition does not require that collected leachate be characterized under state and federal hazardous waste laws and thus does not specifically prohibit the discharge of leachate that is hazardous waste. Given that the JTD and the FEIR both stated that leachate would be disposed offsite, the discharge of leachate should be prohibited.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: C.4

Comment:

Subsection (a) of this provision allows the discharge of contaminated soil at the proposed landfill, but is ambiguous as to whose responsibility it is to ensure that the contaminated soil meets the requirements of the discharge specification. Specifically, subsection (a) identifies certain sampling protocols that must be followed to determine if contaminated soils are hazardous wastes or can be disposed at a municipal solid waste landfill. But, the provision does not state that the discharger must require the party disposing the soil to provide evidence showing that the soil was sampled using that protocol. That requirement should be specified. In addition, any person disposing soils must be required to show that the soils do not contain listed hazardous wastes at any concentration.

Likewise, subsection (b) allows contaminated soils to be utilized as daily landfill cover if approved by the "appropriate agencies." The WDRs must identify those agencies from which approval must be obtained, and indicate what type of approval is required. Again, provisions with this type of vague requirement are difficult for a discharger to comply with, and for a regulating agency to enforce. In addition, the idea that contaminated soils could be used as cover raises a number of issues concerning human and environmental exposure to hazardous materials in the contaminated soils.

Subsection (c) requires all contaminated soils to be "certified as California nonhazardous," but fails to require that the facility receive a certification from the party seeking to dispose the soils or to identify who can properly make the certification.

Subsection (d) also is not clear regarding whether soils containing elevated concentrations of contaminants that do not exceed the state "WET" or federal "TCLP" levels are prohibited from being disposed. The provision refers to Attachments 3 and 4 to the Tentative Order, but those attachments only identify WET and TCLP leachable thresholds. Thus, it appears that the WDRs would allow soils contaminated with toxic materials that may not exceed those leachable thresholds but still could pose a significant risk to public health and the environment to be disposed at the proposed landfill. That is improper, and the WDRs should not allow contaminated soils to be used as cover material.

Finally, the list of soil contaminants in Attachments 3 and 4 is limited to contaminants subject to hazardous waste laws. Numerous other contaminants without established hazardous waste thresholds pose a serious threat to human health and the environment. (See, e.g., 40 C.F.R.

Part 302 for a list of federal "hazardous substances"). As written, these provisions of the WDRs potentially would allow soils contaminated with a vast array of contaminants at any concentration to be disposed at the site and in fact used as cover. That should not be allowed.

Limits on the use of contaminated soils should be stringent to ensure that contaminated soils are not the main source of cover material needed to make up for the lack of sufficient cover materials on the site. Even with the use of alternative daily cover materials, the fact that large portions of the material excavated will be bedrock materials not suitable for cover means that the discharger would seek other sources of cover material. Stockpiling contaminated soils on the site also should be prohibited.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: C.5

Comment:

The discussion of recycled water use at the proposed landfill ignores how any recycled water would be obtained (if possible) and used at the site. For example, the specification discusses the need for cross-connection shut down tests, the installation of hose bibs on the recycled water pipes, the need for airgap separators and other requirements that would apply to the use of recycled water from water lines.

If recycled water is used, however, it would have to be trucked to the site, stored in large tanks, and then distributed on the site by truck for dust control on haul roads and on the landfill face, for habitat irrigation in sensitive areas, and for other uses on the site. Even so, there are no requirements addressing the areas where recycled water could be applied by truck that would limit the potential for human or wildlife contact with the treated wastewater. The WDRs should include requirements that reflect actual uses that would occur and avoid irrelevant boilerplate language.

Given that trucks will be spraying water throughout the site on a continuous basis, the conclusion in the Technical Analysis that the threat of impacts from the "loading of salts in recycled water will be minimized with the construction of liner and leachate collection system also ignores that significant amounts of recycled water would be used on haul roads and in habitat areas where there will be no liner. (TA at pg. 45). For these reasons as well, the use of disinfected secondary-23 recycled water should be prohibited, and only the highest-quality tertiary treated recycled should be allowed.

In addition, the discharge specifications should not be based on the arithmetic mean of 12 months of water quality sampling of the recycled water. Using a 12-month averaging improperly skews the results and allows the use of recycled water with exceedingly high concentrations during some months. At the least, the WDRs should include requirements for peak concentrations of the listed contaminants.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: D**Comment:**

This provision describes how the discharger must respond to a release. But it allows the discharger a number of days to notify the Regional Board and 90 or more days to even propose a response. Of course during the time that a release is being reported and plans to address the release developed (and during the time before the release was detected) groundwater would continue to be pumped and used on site because there is no requirement that pumping and use of groundwater from the point-of-compliance monitoring wells be stopped if a release is detected.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: D.3**Comment:**

This specification prohibits the use of water on trash. If so, how will particulate emissions from disposal operations be controlled?

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: D.6**Comment:**

Subsection (a) requires that any precipitation that comes into contact with waste must be treated as leachate and managed accordingly. (27 CCR. § 20365(c)). But the Technical Analysis does not refer to a section of the JTD that describes how this "contact" water will be separated from stormwater from other "disturbed" areas of the proposed landfill. The JTD should describe this process and it should be reflected in the operational requirements of any WDRs.

Subsection (b) requires that "non-contact" surface water runoff from within the WMU be discharged through the desilting basins. However, as discussed above, the JTD describes a system where certain areas within the WMU will no longer be considered "disturbed" and water would be directed into the PSD channels for direct discharge to the San Luis Rey River without treatment in the desilting basins. Again, neither the JTD nor the Tentative Order make clear how areas would be characterized as "disturbed" and "undisturbed." The discharger should be required to direct all water generated within the WMU to the drainage pipe system and into the desilting basins.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: D.7**Comment:**

Again, erosion control measures for the stockpile/borrow areas have not been adequately described.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: D.8

Comment:

Subsection (b) should specifically state how much leachate can be produced before it exceeds 85% of the design capacity of the primary LCRS or sump pump. The discharger should be able to calculate that figure now given its claims that the LCRS has been designed to satisfy state and federal rules. In addition, while subsection (b) states the depth of fluid in the LCRS sump cannot exceed 24 inches, subsection (c) states that the depth of fluid in any LCRS sump shall be kept "at or below six inches." These requirements appear to conflict.

Subsection (e) requires the removal of liquids in the secondary LCRS to minimize head on the bottom liner, but does not state how often that removal must occur as required by 27 CCR. section 20340(c). As discussed above, the current design of the LCRS impermissibly allows the buildup of head on the liner.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: E

Comment:

This provision describes the discharger's required response to the detection of a volatile organic compound in a background or detection monitoring point. Again, it does even require the discharger to notify the Regional Board for three days after confirming the release has occurred. Then, it allows the discharger even more time to assess the data before it is required to begin the release response procedures identified in Provision D. Once more, throughout this even-longer period of assessment, contaminated water would be used on the site for dust control, habitat irrigation and other purposes.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: E.1

Comment:

This provision requires that the precipitation and drainage control system be constructed to manage a "24-hour storm with a 100-year return frequency." The JTD claims that the drainage control features have been designed for such a storm event. (JTD at pg. C.3-2). But the JTD also acknowledges that the desilting basins were designed to remove silt from a 10-year, 6-hour rainfall event (JTD at pg. C2-19), and admission that the desilting basins are undersized and do not meet these requirements. This raises questions about how these desilting basins will function during storm events that exceed a 10-year, 6-hour event.

The discussion in this section also once again begs the question of whether the Regional Board has reviewed the drainage-control system described in the JTD to determine if it meets

these requirements. The Regional Board should be able to determine whether the design capacity of the drainage system provides for the "gradual release" of retained water in a manner that does not exceed the expected peak flow rate at the point of discharge as if there were no proposed landfill as this specification requires. Given the design descriptions in the JTD, all this information is available for review by the Regional Board and the requirements of the WDRs should be specifically tailored to the system described in the JTD.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: E.6

Comment:

Finding 10 specifically defines the "GCL" component of the proposed liner system. So when subsection (a) requires a minimum overlap of at least 24 inches only for the "GCL component" that requirement is too limited. The overlap requirement should apply for all geomembrane and geotextile materials being installed. Subsection (b) also should require an adequate overlap for all geotextile and geomembrane materials.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: E.7

Comment:

This provision should acknowledge that the Regional Board must inspect and approve any construction. (27 CCR. § 20310(e). The specification requires that a certified engineer demonstrate that the WMU has been constructed in accordance with the plans approved by the Regional Board. But while Provision I.3 of the Tentative Order requires that a "preliminary Design Report" be submitted 120 days prior to the beginning of construction, it does not state that the Regional Board must review and approve the design submittal. In addition, the final engineering specifications need be submitted only 60 days before construction could begin. (Monitoring and Reporting Program at pg. 32). It should be made clear that (1) final designs cannot be submitted until preliminary designs are approved by the Regional Board, and (2) work could not begin until the Regional Board reviews and gives final approval to a final design. Given the scope and significance of the proposed project, imposing a 60-day period for review by the Regional Board is improper.

Subsection (d) requires the discharger to provide the Regional Board with a construction quality assurance report that includes a "technical demonstration that the proposed side slope liner design can be constructed and remain stable and functional on the interior cut slopes" of the proposed landfill. But that report is not required to be submitted until after construction is complete. Because the proposed sideslope design is an alternative to the prescriptive design, that technical demonstration must be provided prior to the approval of WDRs.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: E.8**Comment:**

The WDRs should require that the discharger prove to the Regional Board that, as required by law, the primary LCRS system has been designed "to collect twice the anticipated daily volume of leachate generated" by the proposed landfill prior to approval of WDRs. As discussed above, that design should be assessed in light of the new average annual rainfall amounts at the site.

In addition, the installation of the LCRS systems should be subject to the quality assurance program, should be certified by a registered civil engineer, and should be certified by a technically qualified, independent third-party consultant.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: F**Comment:**

Although the presence of a leachate seep would seem to be a major concern in a facility that would overlie a fractured bedrock aquifer, this provision again impermissibly allows the discharger three days to notify the Regional Board of the seep and does not require a detailed study that identifies the reason for and source of the leachate seep or any increased monitoring at other points.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: Finding 18**Comment:**

Finding No. 18 in the technical analysis admits that the surface water monitoring system is inadequate, and it requires a work plan be submitted to improve it. That indicates to me that the JTD was never complete, and that this draft order is premature. I think the JTD should be rescinded as being complete, and that this Order should be retracted until that information is provided.

Even worse, the technical analysis admits there is not sufficient information to determine if the fractured bedrock aquifer could ever be properly monitored. The technical analysis itself states, quote: "It is not clear that the current groundwater monitoring system meets the applicable minimum performance requirements and that the system must be further evaluated, expanded, and improved to overcome the efficiency cited in this finding." That indicates to me the JTD is not complete, and the draft Order is premature. It's not even meeting the minimum standards of the Resource Conservation and Recovery Act.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: Finding 3

Comment:

This finding states that the description of wastes proposed to be accepted at the proposed landfill is based on Section 1.5 of the JTD. But that section of the JTD does not propose that contaminated soil or decommissioned waste be accepted at the proposed landfill. Moreover, the Tentative Order specifically prohibits the discharge of decommissioned wastes at the proposed landfill. (TO at pg. 14). Similarly, although the Tentative Order allows the disposal of asbestos wastes with less than 1% friable asbestos (TO at pg. 14), the JTD states that "non-hazardous asbestos will not be accepted at the landfill." (JTD Section B. 1.5.2.2). The Tentative Order should not expand the waste materials that could be disposed at the site beyond those identified in the JTD.

Likewise, neither the JTD nor the FEIR indicated that contaminated soil would be accepted at the proposed landfill. But, as discussed further below, the Tentative Order would allow soils contaminated with toxic materials to be disposed at the site as long as the soils did not exceed "hazardous waste" levels. The Tentative Order does not clearly limit the non-leachable concentrations of toxic or other contaminants that could be present in the soil, and does not address contaminants that would be considered "hazardous substances" under state and federal law but are not identified in the laws governing what constitutes hazardous wastes. Comparing the list of "hazardous substances" (40 C.F.R. Part 302) with the list of contaminants identified for their toxicity characteristics (40 C.F.R. Part 261) highlights this vast difference. Allowing contaminated soil to be used as cover material also would create an unnecessary environmental and human health risk by exposing workers, landfill users, and wildlife to contaminants in blowing dust or through dermal contact. Moreover, the WDRs do not require specific procedures that would control stormwater from contacting the contaminated soil and discharging into the San Luis Rey River without treatment. That would create an unacceptable risk to water quality.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: Finding No. 1

Comment:

This finding states that the Joint Technical Document ("JTD") submitted by the discharger was deemed complete by the Regional Board on March 1, 2005. That decision was challenged as improper by the Pala Band at that time, and the letters attached as Exhibit E provided a detailed explanation for why the JTD was not complete. Given the concerns raised previously and the fact that (1) the Tentative Order now acknowledges that the proposed groundwater monitoring well system is inadequate to properly monitor landfill leaks in the fractured bedrock aquifer, and (2) the significant changes in the proposed project that have occurred since that the determination regarding the JTD was made, including the proposal to pump groundwater from formerly dedicated groundwater monitoring wells, the JTD remains incomplete and cannot be the basis for the issuance of any project approvals.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: Finding No. 10(c)

Comment:

Finding 10c should acknowledge that the primary LCRS for the "sideslopes" of the proposed landfill does not meet federal or state prescriptive design standards. (TA at pg. 18). The Technical Analysis admits that the prescriptive design cannot be met and still "maintain slope stability," but states that the proposed alternative design is acceptable "provided that the operation layer . . . constructed directly overlying the primary LCRS, has adequate properties " {Id. with emphasis added).

But unless the Regional Board confirms that condition - that the "operation layer" has "adequate properties" - it cannot approve the engineered-altemative design for the side-slope LCRS. The Regional Board cannot simply require that the condition be met sometime in the future because it must "specify design and operating conditions in WDRs to ensure there is no buildup of hydraulic head on the liner" and find that the LCRS system is designed "to collect and remove twice the maximum anticipated daily volume of leachate from the Unit." (27 CCR. § 20340(b)-(c).) Given these legal requirements, the Regional Board must determine that the primary LCRS system has "adequate properties" to support the alternative side-slope LCRS design before it can consider WDRs.

The JTD indicates that the alternative side-slope LCRS design would result in leachate flowing along the operations layer liner/refuse-interface to slotted pipes at the elbow where the sideslope flattens and meets the main portion of the proposed landfill footprint. (JTD at pg. 2-12, Figure 14). The JTD does not clearly describe how leachate collected in these areas would be transferred to the primary LCRS and the Technical Analysis cites no evidence to support the claim that this alternative design for collecting and transferring leachate would not result in ponding of leachate as prohibited by law. (27 CCR. § 20340(f)). That analysis is critical given that approximately 90% of the leachate generated would be generated on the side-slope areas (FEIR pg. 4.3-21-22), and that analysis must be provided before WDRs can be considered.

The JTD also fails to ensure that there would be "no buildup of hydraulic head on the liner" in the main section of the proposed landfill as required by law. (27 CCR. §20340(c)). In fact, the JTD admits that the proposed design would allow up to 12 inches of leachate to collect on the liner system with a peak daily head of 0.25 inches. (JTD at pg. B.-2). State law requires that the Regional Board "specify design and operating conditions in WDRs to ensure that there is no buildup of hydraulic head on the liner." (27 CCR. § 20340(c), emphasis added). As a matter of law, the Regional Board cannot consider a design that would allow the buildup of head on the liner as described in the JTD.

In addition, there are questions regarding whether the primary LCRS has been designed "to collect and remove twice the maximum anticipated daily volume of leachate from the Unit" (27 CCR. § 20340(c).) These questions arise because the used an annual average rainfall amount of 19.3 inches/year to calculate leachate generation (JTD at App.C, pg. 3-15), but the discharger now claims that the average annual rainfall at Gregory Canyon is actually 25 inches per year, a 30% increase. (RFEIR at pg. 4.15-22). Given this change, the discharger must recalculate the amount of leachate that would be generated. Until that analysis is completed, consideration of WDRs is premature and issuance of WDRs would violate state law.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: Finding No. 10(d).

Comment:

This finding concludes that the discharger's proposal to use a "secondary" LCRS as an engineered alternative to the prescriptive requirement for a vadose zone monitoring system is proper under 27 CCR. section 20415(d). While the Technical Analysis refers to Section C.2,4 and Page C.2-7 of the JTD to support this finding, nothing in those sections of the JTD indicates that the discharger has made the required showing that vadose zone monitoring should not be required.

The Technical Analysis reiterates that the complex local geology of the site "limits or precludes the effective application of preferred vadose zone monitoring methods" and makes it unlikely that a vadose zone monitoring system could comply with the rules and provide early detection of landfill leaks. (TA at pgs. 19-20). But, the Tentative Monitoring and Reporting program only requires that leachate from the secondary LCRS be sampled once annually in October. (Draft Monitoring Program at 9.a.ii). Yearly sampling, however, would not provide an equivalent level of water quality protection as would be provided by a dedicated vadose zone monitoring system with a more-rigorous sampling frequency. The finding that the engineered alternative secondary LCRS is necessary because the geologic complexities of the site make it impossible to properly monitor the vadose zone is not a reason to approve an engineered alternative. Rather, it is a clear warning sign that the proposed landfill should not be constructed at this site.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: Finding No. 10(e)

Comment:

The discharger should be required to develop a contingency plan for managing subdrain flows greater than 10,000 gallons/day prior to the approval of WDRs and not after. In addition, any discharge of water collected in the subdrain system is not eligible for discharge under Regional Board Order No. 2001-96 because it would not necessarily consist only of extracted groundwater. Rather, the water would be collected from below the proposed landfill, a source of toxic materials and any discharge of collected subdrain water would require a National Pollutant Discharge Elimination System ("NPDES") permit.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: Finding No. 12

Comment:

This finding discusses the use of the Borrow/Stockpile areas mainly in terms of their use as stockpile areas. While the discussion of the impacts of using these areas to stockpile materials is incomplete, both the finding and the Technical Analysis completely ignore the impacts that will be caused by the fact that two 150-foot deep mined pits will remain in these areas at the conclusion of operations.

The FEIR described the use of these areas as follows: the 22-acre Borrow Area A site would be used initially to store material excavated from the proposed landfill footprint, and the stored material would rise up to 180 feet above the current grade; and the 65-acre Borrow Area B would be located at the southernmost and upper area of the proposed landfill site, and materials stored in this area would rise up to 160 feet above the existing grade. (FEIR at pg. 3-13). By the end of operations, however, the two borrow pits would be up to 150 feet deep after they are mined to extract additional cover material. (Id.)

The Technical Analysis states that the finding is based on information in the JTD and the finding refers to the Storm Water Pollution Prevention Plan ("SWPPP") to conclude that the construction and operations in the area will be conducted in accordance with best management practices ("BMPs"). But both the JTD and the SWPPP provide only cursory, "trust us" descriptions of how water quality impacts would be avoided. There is little or no discussion regarding how drainage from these stockpile areas and then the resulting borrow pits will be managed to prevent impacts to waters of the state.

For example, the JTD claims that "surface waters will be conveyed from these borrow/stockpile areas and discharged into the existing natural drainage courses." (JTD at pg. C2-5). But those natural drainage courses are not identified in the JTD, the SWPPP, or the Technical Analysis, and the potential for downstream impacts caused by discharges at various stages of storage or mining is not discussed or analyzed anywhere.

Given the location of Borrow Area A, the most likely natural drainage for runoff would be the San Luis Rey River itself making the need to limit the discharge of sediment-laden water particularly important.

Likewise, the finding states that a desilting basin will be constructed at Borrow Area B "to minimize the flow of silt," but there is no reference to any calculations that support the size of the desilting basin or to any description of when it will be constructed or how it will be managed and maintained. The JTD also does not state that a desilting basin would be constructed at Borrow Area A, although the storage area and pit would be located on the banks of the San Luis Rey River and would discharge directly to the river. The WDRs do not establish any requirements for the management and maintenance of these desilting basins to protect water quality during the period the proposed landfill would operate or afterwards. Merely stating that the discharger would comply with the SWPPP is insufficient, especially as the final configuration of these mining pits could lead to serious water quality impacts and the storage of excavated materials in those areas itself constitutes a "discharge" that must be regulated by WDRs.

In addition, given the discharger's claim that the average annual rainfall is higher than claimed in the JTD, the stormwater controls proposed for these areas also need to be reanalyzed.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: Finding No. 14

Comment:

The Tentative Order should confirm that the discharger would be required to install the Reverse Osmosis ("RO") system during initial construction of the proposed landfill. In addition,

if water was to be treated in the RO and/or through a granulated active carbon system, the Tentative Order should confirm that any discharge of the treated water to the San Luis Rey River would require an NPDES permit.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: Finding No. 16

Comment:

This finding improperly concludes that the proposed stormwater conveyance system is in compliance with state rules. However, there is no evidence in the record to support this conclusion.

The first problem is that the WDRs fail to identify criteria that the discharger must apply to determine when a "disturbed" area of the proposed landfill can be treated as an "undisturbed" area. The distinction between "disturbed" and "undisturbed" is crucial because the stormwater-control system would collect and discharge stormwater from "disturbed" areas to the desilting basins before discharge to the San Luis Rey River, but would discharge stormwater runoff from the "undisturbed" areas into the PSD channels which would discharge directly into the San Luis Rey River and bypass the desilting basins. Sediment would not be removed from discharges from the PSD channels. The Technical Analysis does not discuss the issue itself or refer to the discussion of the issue in the JTD.

Consequently, the Technical Analysis fails to address the fact that the JTD provides conflicting definitions of what constitutes an "undisturbed" area. In one section the JTD states that an area would be considered "undisturbed" when "an area of the landfill is completed and native vegetation reaches a state of 70 percent coverage (based on pre-development conditions)" (JTD at pg. C2-22), but states in two other sections that "[o]nce an area reaches 20 percent of pre-developed vegetative condition then stormwater flows will be diverted to the perimeter channels." (JTD at pgs. C.2-28 and C2-32).

Because stormwater collected from these so-called "undisturbed" areas would discharge directly to the San Luis Rey River, if these areas only have been revegetated to 20% coverage, discharges from these "undisturbed" areas would significantly increase the amount of sediment that would be discharged into the San Luis Rey River through the PSD channels (which would not flow into the desilting basins). Allowing increased amounts of sediment to be discharged into the river would have serious water quality impacts.

In addition, allowing the discharger to base this percentage of coverage on some ambiguous "pre-development" condition is a recipe for either violations by the discharger or for the Regional Board being unable to enforce the requirement. The only way to resolve the issue would be to require that stormwater from all areas within the WMU be discharged through the desilting basins and to require the discharger to show that the stormwater facilities have been properly designed to handle a 100-year, 24-hour event as required by law. (27 CCR. § 20365(c)).

Second, the JTD states that the PSD channel system would be constructed high on the sides of the canyon to collect stormwater runoff from Gregory Mountain and the hills to the west in order to prevent the water from flowing into the proposed landfill footprint. (JTD at pg. C2-17-

18). But the JTD also admits that only a portion of the PSD channels will be completed during the first phase of operations when up to a million tons of waste will be disposed. {Id.\ Figure 22). Even so, the JTD provides no clear discussion regarding how stormwater runoff from those areas of the canyon that will not be collected in the PSD channels will be managed prior to the time that the entire PSD system is completed, especially since the PSD channels will be at a higher elevation. Without proper control, stormwater would simply flood down the canyon into the landfill

footprint resulting in serious impacts. Consideration of WDRs is improper until the discharger explains how stormwater will be controlled before the entire PSD- channel system is constructed.

Third, the finding states that stormwater from the disturbed areas of the proposed landfill collected in the desilting basins "will discharge directly into the San Luis Rey River." Because this water would be generated in the disturbed areas of the proposed landfill and potentially be contaminated, a direct discharge of the treated waste water to the San Luis Rey River requires an NPDES permit.

Finally, because the discharger now argues that the site receives 25 inches per year in an average year, a significant increase over the previously claimed average annual rainfall, the discharger must recalculate the 100-year, 24-hour event to determine if the proposed stormwater control systems should be redesigned to meet the regulatory standards.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: Finding No. 17

Comment:

This "finding" merely states that the groundwater detection monitoring system must comply with applicable federal and state rules. But, as the Technical Analysis points out, the system does not meet those standards. Consequently, there is no evidence to support the finding that the monitoring system complies with the required performance standards.

In fact, in "supporting" this "finding," the Technical Analysis states that "[e]ffectively monitoring the quality of groundwater flowing within the fractured rock aquifer ... is limited by a number of site-specific factors," including that (1) groundwater flow through such fractures is "very unpredictable," (2) permeable fractures that "transmit great amounts of liquid" may be "widely spaced and may not intersect the detection monitoring well system," and (3) the "unpredictability of fracture location and groundwater flow imparts additional uncertainty" as to the effectiveness of any groundwater monitoring system. (TA at pg. 22-23). All of these determinations make it impossible and improper for the Regional Board to even consider issuing WDRs.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: Finding No. 18

Comment:

This "finding" as to the surface water monitoring system also simply states that the system must meet specific standards. But the Technical Analysis admits that "it is unlikely that the position of Station SLRSW-1 will provide information that complies with the performance requirements ... required by the applicable requirements from CCR Title 27." (TA at pg. 24). While the Technical Analysis states that the discharger must submit a work plan to "enhance and improve the surface water monitoring system to comply with the applicable performance requirements" {id.}, issuing WDRs would violate state law because the requirements of Title 27 have not been met (27 CCR. §20415(c)).

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: Finding No. 19

Comment:

This "finding" requires that the discharger develop a "contingency plan to provide replacement water to all private and public well owners, and other parties effected by the release of waste or waste constituents" from the proposed landfill. The requirement that this plan be provided is an acknowledgement by the Regional Board that a toxic release from the proposed landfill could happen.

Again, the Technical Analysis supports the need for a replacement water contingency plan by repeating the numerous "technical difficulties" associated with adequately monitoring releases from the site in the fractured bedrock aquifer. (TA at pg. 24). The Technical Analysis admits that the Regional Board "can not determine if the proposed groundwater detection monitoring network will comply with" state and federal performance standards because, in part, the aquifer pumping tests conducted on the site were improper and did not "satisfy the minimum conditions recommended in the available literature, concerning the conduct of aquifer pumping tests in fractured rock aquifers." (TA at pg. 25). The admission that the groundwater monitoring system is inadequate and that it is "difficult to detect, delineate, and remediate in a fractured rock aquifer in a short period of time" may be reasons to require a water-supply contingency plan, but more importantly are reasons why WDRs for the proposed landfill must be denied. (TA at pg. 24).

The requirement that a water-supply contingency plan would not have to be submitted until one year after approval of the WDRs is improper. (TO at pg. 37). More importantly, the requirement ignores the fact that there is no "contingent" water available. The areas that would be impacted initially are within the service area of the San Luis Rey Municipal Water District but not within the service area of the San Diego County Water Authority ("SDCWA") or the Metropolitan Water District ("MET"). This means that water from the SDCWA or MET could not be provided without the approval of those agencies and the possible annexation of the area into their service areas, a lengthy procedure. Given the decreasing supplies of water available through the CWA and MET, it is not clear if there ever would be sufficient water available to serve as an alternative water supply anyway. Bottled water would not be a remedy given that wells in the area also are used to supply water for irrigation and other uses.

Simply put, a contingency plan is not a panacea for the significant risks to water quality and quantity that the proposed project creates. Instead, the Regional Board's concern identifies the critical problem of siting a landfill in an area that would threaten significant sources of drinking water: it simply should not be done. Threatening crucial water supplies when those supplies are decreasing at historic rates in order to allow the burial of waste is wrong.

The Technical Analysis supporting this finding also points out that aquifer pump tests in the fractured bedrock aquifer intended to prove the adequacy of the groundwater monitoring system failed to satisfy the "minimum conditions recommended in the available literature because the tests were conducted in wells "screened over long stratigraphic intervals probably covering multiple rock types, including unweathered and weathered fractured bedrock aquifers." (TA at pg. 25).

But the statement that these wells are screened over long intervals does not do them justice. For example, the monitoring wells installed in 1996 (GLA-1 through GLA-10) are not even screened, but are merely open holes for 100 to more than 200 feet in length. (JTD App. C, Attachment 1). Monitoring wells installed in 1999 (GLA-11 through GLA-16) are screened, but the screened intervals are 20 feet in length or more. (Id.) Even monitoring wells installed as recently as 2004, such as GLA-B, have screened intervals of 30 feet or more. (JTD, App. C-1, Attachment A). Allowing screened intervals of this length results in significant dilution of any potential contamination and so is not proper for monitoring wells. Our experience is that the Regional Board demands that screened intervals in groundwater monitoring wells not exceed ten feet in length to provide proper analytical data. These wells are not even close to that standard.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: Finding No. 22

Comment:

This finding does not reflect the current status of the CEQA process. Specifically, the finding does not acknowledge that the principal source of water for the project identified in the RFEIR, recycled water from OMWD, is no longer available because OMWD has terminated its agreement to sell water to GCL. (Exhibit C). This will require the lead agency to reassess the impacts of supplying water to the proposed landfill under CEQA, if a new source of water is identified.

In addition, although the FEIR did not identify any significant environmental impacts to water quality from the proposed project, that analysis did not address the impacts that would be caused by using the on-site groundwater monitoring wells as water-production wells. As discussed above, the proposal to pump water from these wells threatens to create serious environmental impacts that the Regional Board needs to consider under CEQA as well.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: Finding No. 26

Comment:

This finding is in error because the proposed landfill does not have a source of recycled water to use.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: Finding No. 28

Comment:

The finding that the Regional Board has considered "all water resource related environmental factors" associated with the proposed landfill is not supported by a citation to any evidence in the record.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: Finding No. 6

Comment:

Although this finding states that the overall direction of groundwater flow is to the north, the Technical Analysis specifically notes that the groundwater flow is generally to the north "until it makes an abrupt westerly turn near the mouth of Gregory Canyon." (TA at pg. 15). The Technical Analysis fails to (1) make clear if this abrupt change in direction occurs in the weathered or the unweathered portion of the fractured bedrock aquifer, or (2) discuss how this abrupt change in the direction of groundwater flow has been addressed by the proposed groundwater monitoring system.

The finding also does not reflect the conclusions in the Technical Analysis regarding the geology of the site. The Technical Analysis notes that the site contains three distinct aquifers (the alluvial, weathered fractured bedrock, and unweathered fractured bedrock aquifers), and concludes that "the location and orientation of fractures may be unpredictable and it can be difficult to accurately identify all of the fracture zones affecting groundwater flow direction ... and/or conveying significant volumes of groundwater." (TA at pg. 15). The Technical Analysis states that these geologic factors make it "extremely difficult to predict with confidence" the groundwater flow in the unweathered fractured bedrock aquifer, which can be very high due to the higher porosity of the fractures." (Id.) As discussed further below, these factors make the existing groundwater monitoring system inadequate and issuance of WDRs improper.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: Finding No. 7

Comment:

While the finding identifies the number of domestic and irrigation wells within one mile of the proposed site in the Pala Basin aquifer, it fails to note that the downgradient Bonsall and Mission Basin aquifers provide a critical sources of drinking water to thousands of people,

including residents of the City of Oceanside, and that contamination from the proposed landfill also threatens those critical sources of water.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: Finding No. 8

Comment:

The finding indicates that the location of the proposed landfill complies with the minimum federal siting regulations found in the Resource Conservation and Recovery Act. The basis for this finding is the compliance "checklist" included by the discharger as Appendix A to the JTD. (TA at pg. 16). But, a closer review of the claims in that checklist shows that the site does not comply with these minimum requirements.

First, the checklist simply claims that the proposed landfill would not be located in wetlands. It provides no reference to support that claim, and the Technical Analysis provides no facts showing that the Regional Board has confirmed the claim. The Regional Board should confirm that the proposed project as a whole will not impact wetlands. (JTD, App. A at Question B.2).

Second, the checklist states that the proposed landfill is not located in an unstable area that might threaten "structural components" of the proposed landfill. The checklist cites to some pages from Appendix C of the JTD for support (id. at 8), but those pages do not indicate that any consideration was given to potential impacts from landslides, rock falls from large boulders located on the very steep west side of Gregory Mountain above the canyon, or debris flows from the hanging basins and other areas on the west side of Gregory Mountain. These geologic features all threaten the integrity of the liner, the cover and other elements in the landfill footprint as well as the proposed perimeter stormwater drainage ("PSD") channel which would be located high on the side of Gregory Mountain. The PSD channels are considered "structural components" under federal law. (40 C.F.R. § 258.15(b)(2)). Consequently, this minimum requirement also has not been satisfied.

Third, the checklist claims that the groundwater monitoring system consists of "a sufficient number of wells, installed at appropriate locations and depths to yield groundwater samples . . . that represent the quality of ground water passing the relevant point of compliance" and that the groundwater monitoring system otherwise meets the applicable requirements. (JTD App. A at Question E.2). The checklist also claims that the "number, spacing, and depths of the monitoring system" are based upon scientific information. (Id. at Question E.7). But, as discussed above and below in responses to Finding 17 and Finding 19, the Technical Analysis admits that the monitoring system is not adequate to detect flows in the fractured bedrock aquifer. That is additional evidence that the proposed landfill does not meet the minimum federal and state standards as the finding claims.

The Technical Analysis also claims that the discharger has completed an adequate stability analysis of the proposed landfill. (TA at pg. 18). But the JTD stated that the stability analysis was for the "prescriptive standard design" not for the engineered alternative proposed in the JTD. (JTD at pgs D. 4-17 and App. C pg. 3-9). Consequently, there does not appear to have been any analysis completed of the stability of this liner design under the stresses caused by

piling 30 million tons of garbage on it. Given the fact that the side slopes are so steep that an engineered-altemative leachate collection and recovery system ("LCRS") has been proposed for those areas, it is critical to ensure the stability of the liner system as designed so that it would be able to withstand the stresses that would be created by burying these 30 thousand tons of garbage on it without failing and sliding into or down the canyon.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: G

Comment:

This provision requires notice when there is release beyond the facility boundary, but allows the discharger 14 days to notify "interested and/or affected persons" and another seven days to notify the Regional Board. The provision does not require the discharger to do anything but provide the notifications and include them in the Facility's Operating Record. This is a leisurely approach to a serious problem.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: H.12

Comment:

As discussed above, the discharger should be required to show how it will provide contingency replacement water for water supply wells contaminated by the proposed landfill before WDRs can be issued.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: H.13

Comment:

This provision requires the discharger to submit a plan for "expanding and improving the coverage of the existing groundwater monitoring network" within 90 days of the adoption of the Order. As discussed above, because the monitoring well network is inadequate under federal and state law, WDRs cannot be issued unless it meets those standards. Not only must a plan be submitted, but the Regional Board must determine that the legal standards have been met before WDRs can be issued.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: H.17

Comment:

The Tentative Order does not address water quality impacts that could be caused by the discharge of waste materials to the San Luis Rey River from garbage and other trucks

accessing the site across the bridge. A spill would cause serious and immediate impacts to water quality, and the discharger should be required to prepare a contingency plan to address such an occurrence.

The threat the water quality could increase during times of higher-than-normal flows in the San Luis Rey River. Use of the facility should be limited during those periods, and any contingency plan must identify how spills would be managed during such periods.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: H.18

Comment:

In addition to the comments above on mitigation issues, this provision specifically defines the terms creation, restoration and enhancement. The Regional Board should ensure that the discharger does not use those terms interchangeably when proposing mitigation.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: H.3

Comment:

This provision should require the discharger to take all "necessary" actions to address adverse impacts on the environment, not all "reasonable" steps.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: H.4

Comment:

The financial assurance information should be revised to reflect updated costs estimates provided to the Regional Board (Exhibit G).

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: I.3

Comment:

This requires that a "preliminary Design Report" be submitted 120 days prior to the beginning of construction. However, it does not indicate that the Regional Board would review or approve any submitted designs. In addition, the final engineering specifications need be submitted only 60 days before construction. (Monitoring and Reporting Program at pg. 32). Any submitted plans must be subject to agency review and approval.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: I.9

Comment:

Where any act by the discharger creates an endangerment to human health or the environment, the Regional Board should be notified immediately.

Commenter: Walter Rusinek -- Pala Band of Mission Indians

Section: Prohibition A.6(b)

Comment:

This subsection prohibits the discharge of "liquid or semisolid waste" other than dewatered sludge or water treatment sludge. However, as discussed below, Discharge Specification C.3 of the Tentative Order allows the discharge of leachate into the landfill, something the JTD stated would not occur. This prohibition should apply, and leachate generated at the proposed landfill should be collected and disposed at an off-site facility as promised in the JTD.

Commenter: Jessica Sand -- Private Individual

Section:

Comment:

I strongly urge the Regional Board to oppose the Gregory Canyon Landfill project in northern San Diego County and to deny its pending permit application ("Waste Discharge Permit"). I am deeply concerned the landfill would threaten critical drinking water sources -- including an aquifer, aqueducts, and the San Luis Rey River itself -- that serve thousands of residents and businesses throughout the region. These critical resources should not be placed at risk for a project like this.

The landfill would also threaten more than 1,700 acres of important wildlife habitat that contribute to the area's biodiversity and environmental health, and would disrupt sacred Native American lands, including Gregory Mountain and Medicine Rock, which are important spiritual sites for the Pala Band of Mission Indians.

Commenter: Jean Sawyer -- Private Individual

Section:

Comment:

What about the San Diego Water Authority's aqueduct? Would it have to be moved? Who would pay the cost? What is the water level in this area that's at where they plan to put the dump?

Commenter: Kevin Scanlon -- Private Individual

Section:

Comment:

There are not many unspoiled lands left in the Southern California area. One of these is Gregory Canyon. It has some native plant life and is also home to wildlife - animals and birds including the golden eagle. Of course developers do not care about that. As long as they can make a profit drive all the animals and birds out.

However, what is important to us humans is water and pollution. The developer wants to create a huge landfill. It is very likely that this landfill will have toxics that will pollute the water and this is water that may come out of our faucets. Water is too precious in our region and we can't take chances on it. Also where there is an unnatural landfill there is danger of erosion. There have been many cases of landfills that have eventually failed in developments in the Southern California area and I don't think that developers with their poor record of quality can be trusted with landfills.

I ask you on the Regional Board to block the Gregory Canyon Landfill project in northern San Diego County. Please do not grant a permit application ("Waste Discharge Permit"). Again we need to protect our drinking water sources -- an underground aquifer, the aqueducts run by the county's water authority and the San Luis Rey River itself -- that serve thousands of residents and businesses throughout the region. Once polluted it is very difficult to undo the damage.

Commenter: Diana Schmidt -- Private Individual

Section:

Comment:

Mitigation of a leak is questionable at best. To mitigate the leaks that contaminate the groundwater, the project proposes to filter the contaminated groundwater. As it is not possible to predict the direction, and multiple paths of the leachate leaks, it is very questionable that the filtering mitigation to restore water quality will be effective to protect human health.

Commenter: Diana Schmidt -- Private Individual

Section:

Comment:

The JTD uses outdated information to estimate the composition of the chemicals of concern. The JTD fails to recognize the increasing use of batteries, compact fluorescent lamps as well as conventional fluorescent tubes, which contain mercury, are discarded at end of life and get into the landfill due to ineffective hazardous matter collection systems. Municipal landfill studies show measurable mercury in the leachate and gas emissions via the landfill working face and the buried solid wastes posing environmental and human health risks.

Commenter: Diana Schmidt -- Private Individual

Section:

Comment:

The water replacement plan will be impossible to implement. It assumes that replacement water will be available and the landfill owner will have the resources to deliver it.

Commenter: Diana Schmidt -- Private Individual

Section:

Comment:

Furthermore, the project will emit unacceptable levels of methane, a greenhouse gas plus other toxic gas emissions. The Gregory Canyon Landfill if approved will continue the now discouraged and soon-to-be obsolete practice to accept compostable solid waste compostable (organic matter), the source of methane gas. In fact it proposes to use green wastes as an alternative daily cover. The California Integrated Waste Management Board June 18, 2009 press release reports on their program to divert organic wastes from landfills and use it for biogas energy generation to reduce greenhouse gas emission from landfills. The Sierra Club also supports diversion of organic matter from landfills to minimize the generation of methane gas. Studies have shown that landfill gas collection systems are not effective to limit gas emissions to acceptable levels. The Joint Technical Document fails to address the health effects of toxic gas emission to persons residing and/or working within a 2 mile radius of the landfill.

Commenter: Stephanie Schus -- Private Individual

Section:

Comment:

I hope you and the Control Board will give serious consideration to the following facts and concerns and will oppose the Gregory Canyon Landfill project in northern San Diego County and deny its pending permit application ("Waste Discharge Permit").

Commenter: Nadine Scott -- Private Individual

Section:

Comment:

This project is too close to the underground water transport system for the San Diego Region. This project has a tremendous potential to pollute San Luis Rey River (SLR), which is the drinking source for 200,000 plus individuals. Once it's polluted, it will be virtually impossible to clean up.

Commenter: Nadine Scott -- Private Individual

Section:

Comment:

There is an inadequate supply of water for this site. Dust control, washouts, and decontamination units would not be properly supplied or utilized. This would cause a health & safety hazard as well as create the potential for offsite runoff and sediments from the proposed water delivery trucks. It is very easy to imagine off-site tracking of mud and contaminants from the delivery and trash trucks themselves.

Commenter: Nadine Scott -- Private Individual

Section:

Comment:

There is no need for this dump. Now that AB 939 is being enforced, and with the City of San Diego actually considering enforcing it and making people pay for trash service soon, the trash stream will shrink. The capacity at the existing landfills will be adequate for years and years and years to come.

Commenter: Nadine Scott -- Private Individual

Section:

Comment:

All trash liners leak- these people can NEVER convince me otherwise. A double liner, a triple liner..doesn't matter. The caustic by-products of trash will eat through any of them and the leaks will occur. No honest scientist not involved with project and paid by them will ever say otherwise. The evidence that these liners leak is overwhelming. Any sized insurance policy the developer may carry will never come close to actually mitigating the harms they will cause.

Commenter: Mona Sespe -- Pala Band of Mission Indians

Section:

Comment:

My name is Mona Sespe, I am a member of the Pala Band of Mission Indians and here I am again 25 years later still talking to you about Chokla (Gregory Mountain). Our people have continuously prayed and had ceremonies there since the beginning of our time. My family has been the caretakers of this area and our Tribe still utilizes this area for ceremonial purposes as of today. Your predecessors before you understood the significance and the importance for our people to maintain our right of Freedom of Religion, which would be denied if you vote yes on giving Gregory Canyon a permit. About 20 years ago, Pala, Pauma, Pechanga, Soboba, Rincon, and La Jolla Tribes came together in support of the protection of our sacred mountain Chokla. Native people come to this area to ask for help. My Great Grandmother, her people before her, myself and members of my family have

all come here for ceremony and prayer. The religious significance of Medicine Rock is evident by the paintings that represent puberty right ceremonies. The Native people are the caretakers of Mother Earth. It is our responsibility to our Creator and Mother Earth to protect and preserve all of the animal world, plant world and sacred places. Some of the animals that need our protection include the frog, mountain lion, kangaroo rat, and the Least Bells Vireo to name a few. Our culturally significant native plants needed for basketry include Willows, Oak, Cotton Wood, and numerous food plants.

Everyday people are talking about water and that we don't have enough and need to be rationing it. Yet you are willing to sacrifice our river by permitting a dump on top of it. This threatens the Earth, the Ocean, the animal world and plant world. Our water supply needs to be protected from contamination. How do we do this? The other question is, are we expendable? If you vote yes to give Gregory Canyon Ltd. a waste discharge permit you will be committing Genocide. You will be denying our Freedom of Religion. I have heard people say that Pala doesn't want the dump because of the Casino. That is so far from the truth. We have stood together for 25 years to ask the County of San Diego to deny any and all projects from destroying our sacred mountain so that we may continue to practice our ways and traditions. This area is also registered with the State of California Native American Heritage Commission's Sacred Lands File. If you vote yes to give Gregory Canyon a water permit you are telling all people that religious freedom does not matter. This is saying that the County San Diego County condones taking any church and replacing it with a dump. This not only denies freedom of Religion, but commits Genocide on Native people.

We are in the year 2009 and I am not ashamed to beg you to outright deny the Gregory Canyon Landfill tentative order for waste discharge requirements. You have the right to do this, and it is time to stop approving bad projects. I am begging you to please protect our right to Freedom of Religion. Our religious concerns have NOT been addressed by Gregory Canyon Ltd.

Commenter: Dave Seymour -- Rainbow Municipal Water District

Section:

Comment:

Although the recycled water supply for the operation of the proposed GCL is in question the tentative WDR assumed the water would be recycled water provided from the Olivenhain Water District. The Regional Board typically requires the water supplier to provide oversight, supervision and reporting requirements for the use of recycled water by end users. Additionally, the presiding water district typically prepares and adopts recycled water restrictions and regulations for end users such as GCL. If the GCL uses recycled water as planned, who will provide oversight? If it is a third-party water provider with no jurisdiction or regulatory control over the GCL site who will be responsible to regulate the use of recycled water?

As a result of these and many other significant issues relating to water quality, the Regional Board should deny issuance of a WDR.

Commenter: Dave Seymour -- Rainbow Municipal Water District

Section:**Comment:**

The Rainbow Municipal Water District (District) provides water and sewer service to a population of approximately 18,000 residents in Northern San Diego County. We are actively pursuing projects that would allow us to withdraw about 3,600 acre-feet of water annually from the San Luis River Watershed. If we are successful that would account for almost 15% of our annual water demand.

The District is opposed to the development of the Gregory Canyon Landfill (GCL) and urges the San Diego Regional Water Quality Control Board to deny issuance of Waste Discharge Requirements (WDR) or Operating Permit for the GCL. The District's opposition is based on information contained within the Regional Board staff's own 2009 Technical Report for the GCL, the Tentative Waste Discharge Requirements for the GCL, the Tentative Monitoring and Reporting Program for the GCL, and other science based documentation that shows the proposed Gregory Canyon Landfill poses a significant and irreparable threat to the water quality in the San Luis Rey River, groundwater basin and watershed.

It is important to note that the determination whether or not to issue a Final WDR for the GCL is a discretionary act for the Regional Board. The Regional Board is not mandated to issue a WDR; in fact, if they hold true to the mission statement of the State Board, "...to preserve, enhance and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations", they must deny approval of a final WDR for the GCL. It is a virtual certainty that at some point in the future the GCL will contaminate the water supply; therefore, to protect that supply now and into the future, the Regional Board must not allow this proposed project to move forward.

Commenter: Dave Seymour -- Rainbow Municipal Water District

Section: Finding No. 4

Comment:

In the Tentative Order the Regional Board finds that "municipal solid waste and their degradation products contain a wide variety of inorganic and organic constituents in concentrations that present a significant threat to water quality in the San Luis River Watershed if those wastes are not properly managed".

As indicated in the Tentative Order and Draft Technical Report the geology and hydrology of the Gregory Canyon site is less than ideal for the proposed use. There is a lack of natural protective cover for the groundwater and the aquifer is in fractured bedrock that makes flow unpredictable and more difficult to monitor for contaminants. These issues and others raised in the Tentative Order and Draft Technical Report pose a significant threat to water quality.

Commenter: Dave Seymour -- Rainbow Municipal Water District

Section: Finding No.19

Comment:

Finding Number 19 supports the development of a contingency plan to provide replacement water to public and private well owners who might be affected by releases of contaminants from Gregory Canyon. Section H (12) of the Order requires the discharger to provide the Regional Board with a Water Replacement Contingency Plan within one year of completing phase 1 of the WMU.

What good does it do to allow the operators of the GCL to be in full operation and then figure out how to secure replacement water—that seems counter-intuitive. We are in the midst of a water supply shortage and sources of replacement water are nearly nonexistent. The only local supply would be desalinated seawater and we know from experience with the Carlsbad project that desalination plants can take a very long time to obtain permits and environmental approvals. Wellhead treatment may not solve all contamination problems, and in some cases treatment technologies, such as air-stripping, may involve other regulatory agencies that would bog down the permit process and result in substantial delays. Certainly almost any water replacement method that involved construction of infrastructure, such as well head treatment, groundwater purification or groundwater extraction or injection would necessitate environmental documentation and would delay any replacement water projects.

Any requirement to prepare a Water Replacement Contingency Plan should occur prior to receiving a discharge permit, not a year after construction. Also, that plan should mandate a contractual obligation to guarantee delivery of the replacement water if it is needed. Keep in mind we might be talking about the need for replacement water in a decade—or century—from now. What assurance does the Regional Board have that a guaranteed replacement water supply can be obtained? None; there are no sources of replacement water; the San Luis Rey Watershed is irreplaceable.

Commenter: Dave Seymour -- Rainbow Municipal Water District

Section: H.12

Comment:

There is no replacement water for the San Luis Rey basin.

It doesn't seem appropriate to give them a year after they start operation to come up with a plan and to come up with a source of water.

Commenter: Dave Seymour -- Rainbow Municipal Water District

Section: H.12

Comment:

Finding No. 19 states that it is appropriate for the discharger to come up with a water replacement contingency plan. Section H.12 gives the discharger up to a year after they've already started operation of the landfill to come up with a contingency plan. There is no water available to replace the water that is in the San Luis Rey basin. It does not seem appropriate to give them a year after they start operation to come up with a plan and to come up with a source of water.

If there's no replacement water to replace the basin water that could be lost due to a discharge, all the assurances in the world and all the money in the world isn't going to do the people that need the water any good.

Section H.12 also gives the discharger up to 90 days after they determine a release has occurred to revise their contingency plan and come up with a way that they're going to notify the public that a release has occurred. It doesn't seem appropriate that the discharger, for something as significant as a contamination of a major water supply, would get 90 days to figure out how they're going to respond to the public and they're given even more time to actually react.

Commenter: Dave Seymour -- Rainbow Municipal Water District

Section: H.12

Comment:

Section H.12 gives Gregory Canyon up to a year after they've already started operation of the landfill to come up with that contingency plan.

There is no water out there available to replace the water that is in the San Luis Rey basin. I can tell you as a water professional, we're looking for water all the time. And the Carlsbad desal plant is about the closest thing to replacement water that can be found.

So it doesn't seem appropriate to give them a year after they start operation to come up with a plan and to come up with a source of water, where they're going to find it.

They also indicated that they have some financial assurances that if they do need to replace the water, that they have the financial backing to do that. That doesn't do us any good if there's no water to be found.

They can have all the money in the world, but if there's no replacement water to replace the basin water that could be lost due to a discharge, all the assurances in the world and all the money in the world isn't going to do the people that need the water any good.

Finally, Section H.12 also allows the discharger up to 90 days after they determine a release has occurred to revise their contingency plan and come up with a way that they're going to notify the public that a release and a contamination has occurred.

It doesn't seem appropriate that the discharger in this case, for something as significant as a contamination of a major water supply, would get 90 days to figure out how they're going to respond to the public and they're given even more time to actually react.

Commenter: Dan Silver -- Endangered Habitats League

Section:

Comment:

The San Luis Rey River enjoys a relatively pristine watershed and supports high biological values.

Contamination of the San Luis Rey could affect aquatic resources sensitive to pollutions like the endangered Southern steelhead trout.

Commenter: Pam Slater-Price -- San Diego County Board of Supervisors

Section:

Comment:

Six-hundred and seventy-five truck trips per 10 hours will cross a bridge over an open aqueduct. This bridge over the aqueduct will be constructed with a containment system. But this system is not designed to combat significant rainfall, or flooding in the event of a major storm. Contaminants will then enter the aquifer.

Commenter: Pam Slater-Price -- San Diego County Board of Supervisors

Section:

Comment:

Although Gregory Canyon Ltd assures us that the liner will not leak, the same assurances were given by the proponents of the Las Pulgas Landfill at Camp Pendleton. The liner at Las Pulgas leaked and has been referred to as 'the greatest engineering failure of its kind in San Diego County history.' Your agency then issued the clean-up orders. If a leak occurred at the Gregory Canyon Landfill it would be a catastrophe of epic proportions endangering public drinking water for hundreds of thousands of San Diego County residents. The leak could endanger residents outside the county.

The Regional Water Quality Control Board's Mission Statement speaks for itself: Our Mission at the San Diego Regional Board is developing and enforcing water quality objectives and implementing plans that will best protect the area's waters while recognizing our local differences in climate, topography, geology and hydrology. In this case, topography, geology and hydrology make this landfill more of a threat to our clean water.

I appeal to you to refuse to issue this permit. In the past, your board has consistently ensured high water quality, set storm water and runoff standards, protected state waterways, rivers, creeks, lagoons and more. Your daunting task is to see that not one drop of pollution ends up in our water and changes the good work that you have done.

The threats to water quality posed by Gregory Canyon Landfill runs contrary to your mission. I appeal to you to refuse to issue this permit. Please remember, your mission is to preserve and protect water supplies, not to approve and facilitate landfill construction.

Commenter: Pam Slater-Price -- San Diego County Board of Supervisors

Section:

Comment:

Three San Diego County Water Authority pipelines are at risk. To protect these pipes Gregory Canyon Landfill must provide cement encasement or relocation of the pipe lines, an extremely expensive venture. As of this writing, they have done nothing. Yet Section 3 G of Proposition C promised voters that the proposed landfill project included 'work required to protect any San Diego Aqueduct pipelines to the extent and manner required by the San Diego County Water Authority.' In fact, the December 2002 Final Environmental Impact Report for the landfill required Gregory Canyon Ltd. to execute an agreement with the San Diego County Water Authority 'providing for relocation and protection of the San Diego Aqueduct pipelines.'

Again, this has not been done.

Commenter: Pam Slater-Price -- San Diego County Board of Supervisors

Section:

Comment:

Landfill liners leak.

Commenter: Pam Slater-Price -- San Diego County Board of Supervisors

Section:

Comment:

While the region is facing 13 percent cuts in its imported water allotment and lower rainfall than ever before, Gregory Canyon Landfill threatens our existing water supply. The landfill will be located adjacent to the San Luis Rey River. This river provides drinking water to the City of Oceanside, among others. Making matters worse, the landfill is located on a fractured bedrock aquifer.

A 56.page Tentative Order by your agency states the following; Groundwater within Gregory Canyon flows toward alluvial and fractured bedrock aquifers and toward the surface of the San Luis Rey River. The San Luis Rey River Municipal Water District, the City of Oceanside and the County

Water Authority have plans and objectives for long-term groundwater development in the San Luis Rey watershed. Additionally, nearly 17 domestic wells and 51 irrigation wells are located within one mile of the landfill site.

Commenter: Robert Smith -- California Tribal Business Alliance

Section:

Comment:

On behalf of the seven member tribes in the California Tribal Business Alliance, I am writing to oppose the granting of any permit to allow construction and operation of the Gregory Canyon Landfill.

As California Indian tribes, we are appalled that consideration is being given to this garbage dump at Gregory Mountain, a cultural site of enormous significance to the Luiseno, Cahuilla, Kumeyaay, Serrano and Cupeno people of southern California. Also at the location is the Medicine Rock, a powerful ceremonial site used for ages by the people at Pala.

And, as it turns out, the Gregory Canyon Landfill has significant water supply and water quality problems, as well, that should lead your board to reject the project. The landfill will need 73 millions gallons of water annually, but the developers have no identified source for this necessary supply. The landfill site is next to San Diego County Water Authority aqueducts, and although the developers are required to have an agreement with the Water Authority on protecting the aqueducts, this agreement does not exist. Finally, a leak from the landfill into the underground water aquifer would have disastrous consequences for thousands of people.

This is the wrong place to put a garbage dump from a traditional cultural perspective and from a water supply and water quality perspective.

The seven tribes of the California Business Alliance - the Lytton Band of Porno Indians, the Pala Band of Mission Indians, the Paskenta Band of Nomlaki Indians, the Pauma Band of Luiseno Indians, the Picayune Rancheria of the Chukchansi Indians, the United Auburn Indian Community, and the Viejas Band of Kumeyaay Indians - urge you to reject the Gregory Canyon Landfill.

Commenter: Jane Soule -- Gregory Canyon Ltd.

Section:

Comment:

Concur with the Regional Board that the proposed double composite liner system at the proposed Gregory Canyon Landfill will provide protection of groundwater.

The proposed liner system provides substantially more protection of the groundwater than the liner system required under state and federal law. The proposed liner would be the most protective liner for a municipal solid waste landfill to date in California.

Commenter: Helen Starr -- Private Individual

Section:

Comment:

All water should be used responsibly.
There has never been a landfill that has not leaked.

The decision to place a landfill adjacent to a pristine river and an aquifer that supplies irrigation and potable water to inhabitants in the area defies logic.

The water situation in California will never be without challenge to the 37 million people residing in the state. How this folly of a landfill next to a river came this far as a reality is a mystery to me.

Please, please, do not adopt the Tentative Order for the Gregory Canyon Landfill.

Commenter: Jay Steiger -- Private Individual

Section:

Comment:

I am writing to ask you to deny the permit for the proposed Gregory Canyon Landfill. The location of the landfill atop fractured bedrock, would present an unavoidable danger of ground and river water contamination from chemical and organic toxins. This is a very poor location for a trash dump, please give strongest consideration to the very great risks to our collective health and the probability of an enormously costly cleanup if there is water contamination. Please oppose the permit for the landfill.

Commenter: George Stockton -- Private Individual

Section:

Comment:

First I will introduce myself: I am currently an elected Board Member of the Yuima Municipal Water District located in Pauma Valley, San Diego County. I am also past President of the Rancho Estates Mutual Water Company and board member of the Lazy H Mutual Water Company, also in Pauma Valley

My concern is the contamination of our aquifer due to leakage of poisonous waste from the proposed Gregory Canyon Landfill.

There is considerable information going on about this project, but from a quality standpoint there is one most important fact that can be made regarding leakage from this landfill:

The landfill will be there forever. The landfill liner will not.
Ergo: It will leak.

The Yuima Water Company has recently completed a geophysical study of the aquifer in our district. It shows that our aquifer goes all the way down to Sea Level. Even though some people think of us as being "up hill" from the landfill site, the lowest parts of our aquifer are below the landfill site. Thus, if there is any poisonous leakage our source of water is in jeopardy.

There is no way to remove the poisons from a contaminated aquifer of this size; This aquifer is greater than 43 miles long. The water companies I am associated with will lose their heavily used source of well water and there is no additional imported water available.

I think this is a major quality issue!

Commenter: Laura Tenhunen -- Private Individual

Section:

Comment:

There is no clearcut, detailed water replacement plan for contaminated well water. The project should not be allowed to proceed without

Commenter: Laura Tenhunen -- Private Individual

Section:

Comment:

Filtering any detected contaminated water, as the project proposes, may not be sufficient. Again, due to the fractured rock substrate

Commenter: Laura Tenhunen -- Private Individual

Section:

Comment:

The plastic liner will fail. Long term exposure to the toxic chemicals in the leachate, together with the extreme pressure of the overlying

Once it fails, monitoring the path of the toxic leachate will be nearly impossible. The toxic leachate will travel through numerous cracks

Commenter: Laura Tenhunen -- Private Individual

Section:

Comment:

No methane should be released into the atmosphere. Unless all nations cut greenhouse gas emissions immediately and drastically, we will lose our one and only studies have shown that landfill gas collection systems do not effectively limit gas emissions to acceptable levels. The JTD also fails to address

In summary, the Gregory Canyon Landfill project poses an unacceptable risk to local, irreplaceable natural water resources, and, indeed, to

Commenter: Lonnie Thibodeaux -- City of Oceanside

Section:

Comment:

Where are you going to find replacement water for six million gallons a day when we're having trouble getting any other desals online in the county, such as Poseidon. We understand the nature of the aquifer, because we've been dealing with it so long. And we know that we need to protect the aquifer, because in the future we'll be needing more and more water that's not easy to treat.

We have serious concerns because of our economic interest in the water supply.

We do request that we do provide immediate notification of all participants in the aquifer, all people that have a vested interest in it, and that we're involved in any fix that occurs if there is damage to the aquifer in any way, especially downstream.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:**Comment:**

We propose the following Finding be added between existing Findings 6 and 7:

GROUNDWATER QUALITY. A limited water quality evaluation was performed in August 1999 and a 1-year, quarterly program was conducted between 2000 and 2001. The study included 3 wells in the alluvial aquifer and 8 wells in the bedrock aquifer. Water quality within the alluvial wells was found to meet state and federal MCLs and San Diego RWQCB Basin Objectives. At both upgradient and downgradient locations within the bedrock aquifer, exceedances to either basin objective and/or state or federal MCL's were reported for Chloride, Nitrate and Total Dissolved Solids. The highest reported median TDS concentration was 1,410(mg/L) in downgradient well GLA-2. Upgradient well GLA-5 had a similar median concentration of 1,120 mg/L.

The current data set needs to be augmented in order to statistically determine long-term variability and both background and baseline conditions. These WDRs provide for the collection and evaluation of additional background and baseline data.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:**Comment:**

The north end of the canyon, where the administration pad and the permanent east and west desilting basins will be located is within the 100-year Flood Zone. The Joint Technical Document (JTD) does not address the situation nor does it contain any evaluations to determine whether flooding of the desilting basins would affect operations of the Landfill and overall water quality. Because it is likely that flooding in the river will occur at the same time the desilting basins are needed to control runoff from the Landfill, it is imperative that these basins be designed not to fill up with floodwater and remain available to control Landfill runoff.

Otherwise Landfill runoff water will comingle with the River flood water and water quality will not be monitored and may therefore be impacted.

The north end of the Landfill where the administration pad will be located is underlain by alluvium with a water table within 20 ft of the ground surface. As discussed previously, the data pertaining groundwater elevation is incomplete and higher elevations are plausible making liquefaction of these materials during an earthquake more likely. These potentially higher groundwater elevations are not addressed in the liquefaction analyses presented in the JTD or the stability analyses of the administration pad.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:

Comment:

We propose the following Finding be added between existing Findings 6 and 7:

GROUNDWATER MOVEMENT. Groundwater in the alluvial and fractured bedrock aquifers is in hydraulic communication. Groundwater is estimated to flow towards the north, generally following topography, at gradients ranging from 0.1-0.2 in the bedrock aquifer to 0.045 in the alluvial aquifer. However, piezometric surface contours are constrained by limited data. Groundwater movement throughout the western side of the canyon requires further characterization which is provided for in these WDRs.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:

Comment:

We propose the following Finding be added between existing Findings 6 and 7:

LOCAL GEOLOGY. Gregory Canyon is composed of Mesozoic igneous and metavolcanic bedrock formations and Cenozoic (predominantly Tertiary) alluvial deposits. The middle and upper reaches of the canyon are dominated by the bedrock formations, covered in some locations by a thin colluvial veneer. The lowest (northernmost) portions of the canyon are host to the younger alluvial wedge that overlies weathered bedrock. Top soil varies in thickness from six inches to three feet and are composed of silty sand, silty sand with clay, and silty sand with cobbles and boulders.

Cenozoic Alluvium. In the lower area of Gregory Canyon, a thin (50-foot thick) veneer of unconsolidated residual soils, colluvial, and alluvial deposits covers weathered bedrock. The unit is formed by silty sand with rock fragments varying from cobble to boulder sized. This alluvial wedge pinches out to the south as it approaches the steeper portions of Gregory Canyon.

Mesozoic Bedrock Formations. The upper area of Gregory Canyon is comprised of three bedrock units: two of which are igneous, and one which is metamorphic. The western portion of the canyon is composed of igneous tonalite, whereas the eastern ridge is igneous

leucogranodiorite. Between the two, along the eastern slope of the canyon, is a wedge of metamorphic rock of volcanic and sedimentary origin. The bedrock is further divided by its weathering pattern as follows:

- An upper weathered bedrock unit that contains weathered igneous rocks (i.e., tonalite and leucogranodiorite); and
- An underlying unweathered fractured bedrock unit that contains fractured igneous rocks (i.e., tonalite and leucogranodiorite) forming the basement rock of most of the canyon.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:

Comment:

The hydrogeologic characterization of the Landfill site is incomplete and may be flawed. As a result, there is no assurance the proposed groundwater monitoring program will be effective and it may not be possible to design and install an effective subdrain system, which is a key element in a safe landfill design. The potentially incomplete characterization also creates the false impression that there is no possibility that (should the Landfill leak) seepage could migrate to the west and northwest where no monitoring wells are planned.

The monitoring wells installed in the canyon's Thalweg (the bottom of the natural channel draining the canyon) are approximately 2000 feet apart, which makes it difficult to project water levels in between the wells to accuracy better than 10 feet. In addition, based on a review of the sparse available data, groundwater levels in these areas can fluctuate by up to 19 feet from a series of dry to wet years. This makes predicting the maximum groundwater elevations at a specific location very difficult, and errors of more than 10 to 15 feet are likely. This is a critical factor in

the design of the base grading plan of the Landfill since the base of the liner system must be at least 5 feet above the highest groundwater level. Because every foot rise in the elevation of the bottom of the Landfill represents an equivalent loss of air space and therefore a loss of revenue, there will always be a tendency to design the liner system as close to the groundwater level as possible.

Significantly more field work (four to six monitoring wells) and consistent monitoring over several years is needed to assess if the proposed design is appropriate.

The supplemental hydrogeologic study (GLA, 2004) implies there is a "groundwater flow boundary" along the western ridgeline that would contain a hypothetical seepage release to groundwater from within the Landfill. Portraying this barrier as a complete impervious feature is incorrect and misleading. Such geologic features tend not to occur in nature. Furthermore, with the limited available data, the exact opposite conclusion could be drawn: i.e. that the western flank of Gregory Canyon is a permeable fractured rock system that could convey seepage from the Landfill to the west. As a result of this misleading interpretation no provision is made for monitoring or contingency seepage extraction wells along the western side of the Landfill.

The groundwater contour map provided in the supplemental hydrogeologic study (GLA, 2004) along the western side of the Landfill (Figure 2) is based largely on speculation and the

assumption that groundwater levels very often follow topography. However, when one views the Landfill site in a three dimensional perspective as shown on Figure 3, it becomes evident that the western flank is a relatively small bedrock mound when compared to Gregory Mountain on the east side. This western flank therefore receives much less rainfall recharge. In the event the limited recharge it received was readily conducted to the west by the fractured rock, there would be no groundwater mound in this area as shown on Figure 2. Quite the contrary, as shown by the alternative contours drawn on Figure 2, the groundwater could be migrating from the Landfill site toward the west.

Both depictions of groundwater contours on Figure 2 are based on the available data. Neither can be refuted or supported unless significantly more field data is collected and evaluated. In the event the alternative depiction or some depiction between the two shown on Figure 2, prove to be correct, the groundwater monitoring program would have to be revised and expanded considerably.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:

Comment:

We propose the following Finding be added after the existing Finding 8.

FLOOD ZONE. The Gregory Canyon Landfill borders the 100-year flood zone of the San Luis Rey River. The landfill facility and desilting basin are located within the flood zone.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:

Comment:

The Phasing Plan presented in the JTD includes four phases labeled Phase I through Phase IV. Phase I will cover approximately 50 acres of which 34 acres are lined. It is anticipated that Phase I will be further subdivided into stages, with each stage accommodating typically two years of waste. Based on anticipated daily waste intake and size of Phase I, it is expected that Phase I will be developed in three to four stages. Phase I is the most critical phase in the development of the Landfill. It is the first phase of the entire operation and most of waste mass will be stacked behind and above it. The subdrain and Leachate Collection and Recovery System (LCRS) installed during Phase I will need to convey all the water that may reach the drain and all the leachate generated by the 31 millions tons of waste. It also has to be sufficiently durable to perform for well over 60 years (30 years of landfilling and 30 years of post-closure monitoring). Consequently, the staged construction of Phase I is critical and therefore staging plans and design details should be reviewed and approved by the RWQCB Board following public notice and comment, not just by the RWQCB Executive Officer. This staging plan should provide details for the connection of the liner system from one stage to the next, location of leachate collection sumps, management of stormwater during the operation of each stage and other pertinent information.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:

Comment:

Desilting Basins

Based on the JTD, Phase I will behave as a large dam isolating the south end of the canyon. Although it appears that all stormwater from the south end and the southfacing slope of Phase I will drain to the temporary desilting basin, it is not clear how this temporary desilting basin drains. The damming effect of Phase I may lead to increased water infiltration into the subgrade in the south end of the canyon, which may in turn lead to an increase in groundwater elevation at the south end with water penetrating the subdrain. Further, the excavation and fill plan of Phase II eliminates the temporary desilting basin. It is not clear then how stormwater will be managed during construction and landfilling of Phases II, III, and IV.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:

Comment:

We propose the following Finding be added after the existing Finding 3.

WASTE INTAKE. The waste intake rate is anticipated to be 1,950 tons per day (tpd) in year 1 and ramp up to an average of 3,200 tpd from year 2 through year 5.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:

Comment:

One of the most important aspects of a groundwater monitoring program is the establishment of baseline water quality conditions. These are typically determined by performing statistical analyses on groundwater quality data collected from wells a year or more before the start of landfill construction and operation. This aspect is particularly important at this Landfill site as the groundwater quality naturally varies significantly from one location to the next. If statistically sound baseline concentrations of key constituents that also occur in landfill leachate are not determined now, it will be almost impossible to later determine whether water quality changes at any one well are due to either natural fluctuations, changes in recharge patterns caused by the large impermeable liner of the Landfill, and/or the impact of seepage from the Landfill.

A number of monitoring wells have already been installed along the toe of the Landfill (Figure 5). However, these do not include any wells along the west side of the Landfill and no statistically-based baseline concentrations have been established.

It appears that the last time the wells were monitored was in 2004, over four years ago. The proposal in the Monitoring and Reporting Program to monitor these wells for a year during construction is totally inadequate. First, the quality in these wells may be affected by the

construction activities and therefore of no use in a statistical evaluation and second, the wells are located within a large pad or working platform to be constructed at the toe of the Landfill. It will be extremely difficult if not impossible to preserve the integrity of all of these wells in an area that will be subjected to up to 40 feet of fill. There are other issues with the proposed monitoring plan which are discussed in the comments attached.

A more robust monitoring system is required; one that would not be affected by construction and that includes all necessary provisions to monitor along the western side of the Landfill. Furthermore, one to two years of water quality data are required under undisturbed, i.e. pre-landfill construction conditions.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:

Comment:

The WDRs require a Water Replacement Contingency Plan within one year of completing construction of Phase I and reference a Contingency Water Treatment System without providing any specifics. Furthermore the WDRs require the construction of a contingency water treatment system. However it does not appear that there is a requirement detailing its operation. There is a contingency plan in the JTD (Appendix F-2), however it is generic in nature and does deal with some of the key water management requirements at the landfill. Furthermore there is no requirement for an Emergency Response Plan or and Emergency Preparedness Plan to address catastrophic events such as fire, earthquake, and flood. As these plans are all vital to the safe containment of wastes and the prevention of water quality impacts it is imperative that they be established and approved by the RWQCB before either construction starts or waste landfilling begins. Once construction is completed and waste disposal begins, it will be much more difficult for the RWQCB to obtain concurrence on effective plans.

We recommend that the Water Replacement Contingency Plan and the Emergency Response Plan be developed and approved before construction is allowed to commence. Furthermore, we recommend that the proposed Contingency Plan in the JTD be expanded to include more details on how the subdrain flows, potential pump back from the detection monitoring wells, and the contingency water treatment systems will be operated be provided before waste landfilling begins. We also request that the public be provided an opportunity to comment on these plans. Furthermore, we recommend that the WDRs be more specific regarding the Contingency Water Treatment System, and require that it be constructed and be ready to operate before waste disposal occurs, and that furthermore an NPDES Permit be obtained for the discharge of treated effluent from the plant be obtained at this time.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:

Comment:

Our concerns arise from the fact that the site hydrogeologic characterization is still incomplete, that the proposed groundwater monitoring program is inadequate and may need complete revision, that there are several landfill design issues that have not yet been resolved, and that the required contingency plans, which are vital to protecting the surface and groundwater resources in the area, have not yet been developed. Finalizing the WDRs at this stage would expose the RWQCB to the risk of having to deal at a later time with needed site investigations and design and operational changes that cannot be resolved to its satisfaction under the current timeline for approving the WDRs.

While it is recommended the project and the WDRs be deferred until the issues we have identified thus far are resolved, we understand that this may not be possible. As an alternative approach we recommend that once the RWQCB staff have resolved the issues identified, the approved WDRs include the requirement that the resolution of the issues that involve changes to the current site characterization, the monitoring plan, the design of the Landfill, and the finalized contingency plans be presented to the Board for approval and that there be an opportunity for public notice and comment prior to the Board's action. We believe that these issues are so critical to the long-term successful operation of the Landfill that they should not be left to the unreviewed authority of the Executive Officer of the RWQCB.

The Gregory Canyon Landfill (Landfill) lies in an area where any releases of waste material could impact vital ground and surface water resources. It is therefore imperative that the RWQCB does everything possible to ensure that the construction, operational, monitoring and contingency plans are sound.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:

Comment:

Proposed Additions to the Order

(NEW SECTION) HYDROGEOLOGY. Prior to construction, the Discharger will submit for Board approval following public notice and comment a Hydrogeologic Assessment Workplan that will address the additional data and evaluation requirements for the subdrain design, the hydrogeologic of the western flank, and the monitoring system design. This assessment should be designed to address the following:

- The piezometric surface in the middle and upper portions of Gregory Canyon should be more clearly delineated. A network of wells on the order of 2 to 3 times the size of the existing network would more accurately define the hydraulic regime in these area.
- The piezometric surface and groundwater conditions in the western flank of the Landfill site.
- A minimum of 2 consecutive years of groundwater elevation data, collected quarterly for all wells, and collected within the last 4 years will better characterize the potential changes in groundwater elevation.

On approval of the Work Plan by the RWQCB the Discharger shall complete the necessary filed investigations and evaluations and shall submit the results in a Hydrogeologic Investigation Report to the RWQCB. This report shall be reviewed and approved by the RWQCB with or without requirements for additional data and/or evaluations. The initial Hydrologic Investigation Report shall be submitted prior to construction of the Landfill.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:

Comment:

ALTERNATIVE DAILY COVER: The Discharger shall submit supporting for the use of alternative daily cover in accordance with §20690 of CCR 27.

Reason: A regulatory requirement.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:

Comment:

(NEW SECTION) DESIGN DOCUMENTS: The discharger shall submit for RWQCB review and public notice review and approval prior to construction, design documents for each new stage. The design documents shall include the construction drawings, the technical specifications, a Construction Quality Assurance Plan, specific to the construction, meeting the requirements of § 20324 of Title 27, and a Design Report with the following engineering calculations:

- Geomembrane puncture resistance
- Anchor trench design
- Wind uplift resistance
- Pipe strength calculations
- Leachate collection and removal system design calculation
- Hydrologic and Stormwater control system design
- Geotechnical analyses
 - Cut slope stability analysis
 - Seismic parameter selection
 - Waste slope stability analyses
 - Veneer stability analyses (if applicable)
 - Interim waste slope stability analyses

This design shall also address how the construction and operation of the desilting basins will be safely conducted in the 100-year flood zone and the seismic stability analyses for the soil stockpile.

This design report shall include all pertinent supporting data. The analyses shall be performed using geomechanical properties obtained using the materials (soils and geosynthetics) that will be used on site. GCL hydration effect shall be included in the analyses.

All design documents will be kept in both paper and electronic format until final closure of the Landfill.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:

Comment:

We propose the following Finding be added after the existing Finding 2.

PHASING PLAN. The Gregory Canyon Landfill includes a single 183 acre class III Waste Management Unit comprised of four phases. Each phase will be constructed on an as-needed basis as shown in Attachment XXX (attachment to be included in the WDRs showing detailed phasing) which is incorporated herein and made part of this order. Each phase will be further developed in stages lined at the time they will be needed.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:

Comment:

Phase I of the Landfill Construction is the most critical and all the systems (liner, LCRS, LFG collection) will be connected and be buried under Phase I. Also the interconnection between stages and the management need to be detailed and understood.

(NEW SECTION) PHASING PLAN. The discharger shall submit for RWQCB Board approval following public notice and comment a detailed phasing plan for Phase I. The plan shall show the different stages within Phase I. The phasing plan shall include the anticipated life of each stages and the anticipated tonnage of waste to be received.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:

Comment:

We propose the following Finding be added between existing Findings 6 and 7:

SURFACE WATER QUALITY. Surface water in San Luis Rey River both up and downstream of Gregory Canyon was analyzed for water quality parameters in 1999 and 2000-2001. Both locations exceeded Basin Objectives for TDS. Other water quality parameters besides TDS were similar both above and below Gregory Canyon and were below Basin objectives. However, the monitoring period is not sufficient to adequately establish statistically based background conditions and these WDRs provide for additional data collection and evaluation.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:

Comment:

Proposed Additions to the Order

(NEW SECTION) CONTINGENCY WATER TREATMENT SYSTEM. The Discharger shall install construct and commission the Contingency Water Treatment System described in the Findings Prior to the acceptance of waste in the first stage of Phase I. The associated NPDES permit shall also be approved prior to acceptance of waste.

The Contingency Water Treatment System must be fully operation and ready to be used on a moment notice. Therefore all hook-ups need to be installed and all permits on file as discuss previously in these detailed comments.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:

Comment:

We propose the following Finding be added between existing Findings 6 and 7:

HYDROLOGY. Gregory Canyon is a north-draining tributary canyon of the San Luis Rey River valley with a catchment area of approximately 458 acres. An ephemeral stream drains Gregory Canyon, flowing only in direct response to precipitation events. Neither frequency nor seasonal flow volume within the ephemeral stream has been quantified. A hydrologic evaluation estimated the peak flow rate (during a 100-year, 24-hour precipitation event) to be approximately 765 cubic feet per second (cfs) or 343,000 gallons per minute (gpm). The estimated peak flow for post-developed conditions is 807 cfs, or 362,000 gpm.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:

Comment:

We propose the following Finding be added after the existing Finding 18.

LANDFILL GAS SYSTEM - The Landfill gas extraction and recovery system will consist of vertical extraction wells joined through a system of above-ground lateral pipes which will then connect to a main leader pipe leading to the flare station. A perimeter landfill gas migration monitoring network will also be installed.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:

Comment:

We propose the following Finding be added after the existing Finding 8.

LIQUEFACTION. The northern most of the Gregory Canyon Landfill administrative and facility pad as well as the access road lies over alluvium with the highest groundwater elevation recorded at wells GLA-3, GMW-1 and GLA-10 on the order of 20ft below ground surface. This area of the site may be subject to liquefaction or seismically induced high pore water pressure that could lead to settlement.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:**Comment:**

(NEW SECTION) LIQUEFACTION ANALYSIS: The Discharger shall submit for RWQCB Board approval following public notice and comment a liquefaction analysis that updates and complete the analysis submitted in the JTD. The discharger is required to provide a complete liquefaction analysis for the alluvial soils underlying the site or the "alluvial wedge" as described in Section 3.4 of Appendix C. This analysis should include as a minimum:

- Boring logs documenting raw, uncorrected standard penetration resistance, N_m , values for the entire boring log profile (from ground surface to depths of 50 below grade).
- Boring logs should also clearly document drilling methods (mud-rotary, or hollow-stem auger).
- Results of all laboratory classification tests (% fines, Atterberg limits) performed should be provided.
- The analysis should document corrections applied and should provide a summary of corrected standard penetration resistance, $(N_1)_{60}$ and $(N_1)_{60cs}$ values used. The analysis should specifically address corrections, if applicable, for effects of gravel/cobbles and other stratigraphic details on the raw blow counts.
- The analysis should document the assumptions regarding historic high groundwater levels at the site, and if appropriate provide liquefaction evaluations considering the potential for seasonally elevated (above 20 feet below ground surface) groundwater levels.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section:**Comment:**

We propose the following Finding be added between existing Findings 6 and 7:

SEISMICITY. The site is located within the southern portion of the San Andreas transform system. The nearest fault within the system is the Elsinore Fault, located approximately 6 miles to the northeast. The expected peak horizontal ground acceleration for the maximum credible event (i.e. large rupture on the Elsinore fault) at the Gregory Canyon site is 0.2 to 0.4 g.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: B

Comment:

B. DETECTION MONITORING PROGRAM

General Comment:

There are several issues with the proposed monitoring wells and as a result, the monitoring plan should be completely revised and sufficient time should be allowed to collect sufficient baseline data:

- There are insufficient alluvial monitoring wells and the background well is in the wrong location. As shown on Attachment No. 1 to the WRP, the only alluvial detection well is GMW-3. Typically two to three wells would be more appropriate in order to protect the alluvial water.
- The background alluvial well LUC10#2R is located on the wrong side of the San Luis Rey River, i.e. it is located north of the river while the landfill is located south of the river. A different existing or new well on the same side of the river, but upstream of the landfill should be used.
- As discussed in the cover letter and in comments on the WDR Findings, the hydrogeologic characterization of the west flank of the landfill is incomplete. Once completed, it may be necessary to add additional bedrock and alluvial monitoring wells to the west of the landfill.

While the Discharges Monitoring and Reporting Program (Appendix G of the JTD) proposes geologic mapping of the western flank during the early phases of landfill construction, the WDR's do not require such evaluations. The WDRs should be modified to require that such an evaluation be completed before landfill construction and that it be augmented by deep boring and hydraulic testing. Geologic mapping is not sufficient and will not establish whether there is a deeper water table in this area and should be supplemented with a drilling campaign.

Ten or eleven of the proposed twelve bedrock detection wells are located in an area where the administration pad will be constructed. There appear to be no requirements to protect these wells during construction. Details on how to extend them through the fill that will be placed, how they will be replaced in the event that they are destroyed during construction (a frequent occurrence), and how much new baseline monitoring would be required for these well replacement should be provided.

The second downstream surface water monitoring location (GCSW-2) is not shown on Attachment No. 1. The upgradient location, SLRSW-1 appears to be very close to the surface drainage from the landfill and its location should be reviewed to assure it is far enough upstream.

It is not clear how the proposed bedrock or alluvial detection wells can be used to determine groundwater flow rate and direction. The bedrock wells are generally in a row and additional wells further downgradient would be used to establish reliable gradients. For only one alluvial well it will not be possible to establish gradients.

As indicated above, the monitoring program needs to be revised. Also the RWQCB needs to be satisfied that there is sufficient reliable hydraulic conductivity data available with which to calculate flow rates. The requirements to submit a revised monitoring plan are covered by the changes recommended earlier in these detailed comments.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: B.1

Comment:

Requiring the discharge of waste to not cause any exceedances of background concentrations is not a workable concept for major cations and anions. As shown on Figure 4, several downgradient monitoring wells naturally exceed a background value, depending on which value is used.

In order to achieve an effective monitor program "baseline" conditions need to be defined. This requires that several years of quarterly data (or more frequently samples) be collected from the proposed detection monitoring wells before construction of the landfill occurs. After construction the changes in water quality, these wells can then be monitored. Baseline may also be affected by the presence of the landfill which because of its large impermeable area will result in changes in recharge and groundwater flow patterns. It may, therefore, also be necessary to monitor the wells for a period after landfill construction and before the placement of waste.

The discharge specifications should be modified to include requirements to a hydrogeologic investigation and evaluation report to address the above and other hydrogeologic issues raised in these comments. The proposed language for this is provided in Section 2.2 below.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: B.10

Comment:

10. SUBDRAIN MONITORING

Subdrain flow monitoring (when flow occurs) is critical and should be performed monthly rather than quarterly. It should also be initiated as soon as construction is completed and not when flow appears in the secondary LCRS. The physical presence of the landfill itself may change the water quality in the subdrain and these changes should be monitored.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: B.12

Comment:

12. REPORT OF RESULTS FROM FIVE-YEARLY COC SCAN

Due to the importance of the water resources adjacent to the landfill, it is recommended that the COC scan be done more frequently than every fifth year. It is recommended this monitoring be done at least once every year.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: B.5

Comment:

Comments On Order 5:

This specification is unclear and can lead to disposal of liquids that could report to the primary and secondary LCRSs. It is not the intent of the WMU to contain liquids. The order should be modified as follows:

Add the following wording:

In the event liquid is disposed of the Discharger shall request approval from the RWQCB in writing for such disposal. The request should include a description of the quantity and quality of the waste liquids, the procedures used to dispose of these liquids in the landfill including a description on how these would assure the liquids are absorbed by the waste in the landfill, and the supporting evaluations and/or test information demonstrating any liquids will not report to the primary LCRS.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: B.8

Comment:

8. SURFACE WATER MONITORING

Quarterly monitoring for surface water is not adequate. Monthly monitoring should be required.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: C.1.b

Comment:

1.b. Surface water samples should include estimates of flow; the standard should not be whenever possible. The value of surface water data is not very significantly if there is no corresponding flow data.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: C.2

Comment:

Comments On Order 2: SEWAGE SLUDGE

It is not clear how this specification will be achieved and how the landfill operator will determine what portion of the non-hazardous solid waste that can be taken into account when determining how much sludge can be co-disposed. As a minimum, it should be specified that the wastes need to be co-disposed in such a way that the solid waste can absorb the liquid and that there be a minimum thickness of solid waste underlying a specified thickness of sludge.

The baseline 5:1 solids-to-liquid ratio required should be changed to 10 to 1, to allow for more absorption capacity to be available and to accommodate inefficiencies in the mixing of the sludge and the solid waste. The following words should be added to provide for additional flexibility.

The order should be modified as follows:

Solids-to liquid ratios of between 5 and 10 to 1 can be permitted provided the Discharger completes representative site specific testing to demonstrate that the liquids will be absorbed as allowed in Title 27, Section 20220(c)(3). This site specific testing shall take into account the procedures proposed to mix the sludge with the solid waste.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: C.2.b

Comment:

2.b. Concentration limits. The use of background only concentrations will be limiting, naturally since some of the detection monitoring well concentrations are already higher than in the background wells. As discussed previously, provision needs to be made for establishing baseline water quality and for providing sufficient time to conduct the monitoring for these values. Data supplied by the discharger extend through 2004 and several wells (GLA-A through GMP-2) have less than one year worth of data (Appendix G, Monitoring and Reporting Plan). The discharger should be required to collect sufficient current ground water quality data before construction starts.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: C.6.b.i

Comment:

6. CALIFORNIA NON-STATISTICAL DATA ANALYSIS METHOD

b.i. Because of the sensitive nature regarding the local water supplies and as it can take several months or longer to reconcile and finalize evaluation of “tentative” indications of a release, the discharger should also provide the San Luis Rey Municipal Water District with these notices so the district can take appropriate measures to protect its water supplies.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: D.1.a

Comment:

1.a. The discharger should notify the San Luis Rey Municipal Water District immediately and inform the San Luis Rey Municipal Water District of the day of the retest.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: D.2.b

Comment:

2.b. Waiting 180 days after the discovery of a release before a preliminary engineering feasibility study is submitted may be for too long and could result in corrective action being delayed by a year or more. The discharger should be required to implement an interim corrective measure as needed within 30 days of discovery of the release. Furthermore, the San Luis Rey Municipal Water District should be informed of any releases and corrective measures that are installed.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: D.4

Comment:

Comments On Order 4: VERTICAL SEPARATION

This is a critical element of the design, particularly in the steep canyon environment. Referring to our comment on Finding 6 above, the hydrologic study is incomplete and may not be representative of maximum groundwater elevation. Further, this specification implies that part of the liner system, which has a total thickness of 81 inches, could be in water (namely the subdrain and the low permeability material). Based on the paucity of data available as to groundwater elevation within the canyon, it will be difficult to determine what the maximum future groundwater level will be without collecting and evaluating additional data.

The specifications should therefore require that the discharger collect sufficient additional data to accurately determine the maximum groundwater level and to submit these evaluations and the proposed liner design for each stage of landfill construction to the RWQCB for review and approval before construction.

The orders should be modified as follows:

The Discharger shall submit the Master Excavation Plan with cross sections showing the location of the limits of excavation and the maximum anticipated groundwater elevations for approval by the RWQCB Board following public notice and comment. These groundwater elevations will be based on the results of the hydrogeologic characterization required in these orders.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: D.6(a) and (f)

Comment:

Comments On Order 6 (a) and (f): SURFACE DRAINAGE

It does not appear that the current proposed design will meet the requirements specified. As shown on Drawing 10 of the construction Drawings, the Phase I will act as a dam across the Canyon and despite a temporary desilting basin, a large portion of the watershed to the south of Phase II will be without active stormwater control structures. This condition may in fact lead to accumulation of surface water (undesirable conditions as stated in subparagraph f) and in an increase in infiltration, which could lead to an increase in groundwater elevation under the liner system. These design elements appear to require significant modification and are related to the Phasing Plan.

The orders should be modified to include the following:

A phase by phase drainage plan with accompanying documents detailing the rationale for the plan shall be submitted with the construction drawings to the RWQCB for approval by the Board following public notice and comment before construction of each phase.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: Finding No. 10.e

Comment:

Comment

According to Section C.1-1 of the Joint Technical Document, "the bottom subgrade will be a minimum of 5 feet above the highest anticipated groundwater level." Plate 2 of the Supplemental Investigation Hydrogeologic Investigation Report (GLA, 2004) (included as Appendix C-1 to the JTD) shows the base grading contours overlain by an estimated piezometric surface elevation contour map. This surface is based on groundwater elevation data from October, 2004. Review of the groundwater elevation data set indicates groundwater elevation in some wells has varied by as much as 19 feet. Specifically, GLA-7 (located in the lower reaches of Gregory Canyon) has a historical high groundwater elevation 18.95 feet above the elevation used in contouring. Similarly, groundwater elevation at GLA-8 (located approximately 1,800 feet south of GLA-8, in the middle of Gregory Canyon) has a historical maximum groundwater elevation of 570.71 feet (December 16, 1996), 11.49 feet higher than the value used for the piezometric surface estimate of 2004. The grading plan for the Landfill indicates that the base grade may come

within 10-20 feet of the 2004 piezometric surface at certain locations (such as 600 feet southeast of GLA-8). Based on the variance in groundwater elevation, and the relative lack of groundwater elevation data, there is a justifiable concern that the current base grading plan will result in the subgrade intersecting the piezometric surface either during or after construction.

Furthermore, it is not clear that providing for 10,000 gallons of above storage tank capacity is sufficient. Assume the subdrain flows at between 5 gpm (dry weather) and 50 gpm (wet weather), this storage capacity would be sufficient for 3 hours to 1.4 days which is not likely to be sufficient to make decisions on what to do with the flow, unless there is a comprehensive plan in place to provide for early characterization and decisions on subdrain flow management. It is therefore important that the RWQCB review and approve these plans before waste is deposited in the Landfill.

It is assumed that the required plans can be incorporated in a Contingency Waste Management Plan that would document how the subdrain flow would be managed and how the Contingency Water Treatment System would be operated, amongst other requirements.

Proposed Revision/Addition to WDRs:

As required by the Orders, the Discharger will submit for review and approval by the RWQCB Board following public notice and comment a Contingency Waste Management Plan that will include estimates of the range of groundwater seepages and the quality of these seepages into the subdrain system based on a reasonable worst-case scenario rise in groundwater elevation and wet weather conditions.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: Finding No. 12

Comment:

Comment

A seismic stability analysis of Stockpile A, slated to remain in place for 25 years, was not performed.

Proposed Revision/Addition to WDRs

Text has been suggested under the Order Section below.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: Finding No. 14

Comment:

Comment

This finding should be reworded to indicate that the Contingency Water Treatment System will be constructed and will be ready to operate with an approved NPDES permit before any waste

is placed in the landfill. It is not clear from this finding that this will be the case or that there is a requirement for an NPDES permit. Without an NPDES, the treatment system would be ineffective.

We propose the following revision to the first and last sentences of Finding 14:

CONTINGENCY WATER TREATMENT SYSTEM: An Agreement between the San Luis Rey Municipal Water District and the Discharger requires that a contingency water treatment system is provided.

The treatment system will be required to be operational before any waste is disposed of and an NPDES permit would have been obtained at this time to allow the discharge of treated water.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: Finding No. 19

Comment:
Comment

It appears that the plan has not been prepared. It should be developed and approved before construction can commence.

Proposed Revision

See discussion under Orders.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: Finding No. 6

Comment:
Comment

The hydrogeologic characterization of the site is incomplete and should be completed before the WDRs are finalized. Alternatively, this finding could be revised to indicate that the characterization is incomplete and that it and the groundwater monitoring plan needs to be completed or revised, and approved by the Board following public notice and comment prior to landfill construction.

Proposed Revision/Addition to WDRs
LOCAL HYDROGEOLOGY.

Groundwater within Gregory Canyon occurs in two aquifers: An alluvial aquifer, composed of unconsolidated colluvial and alluvial deposits (coarse gravels, sands and silts) and a fractured bedrock aquifer composed of both weathered and unweathered igneous rocks (tonalite and leucogranodiorite). Because groundwater recharge is seasonal and varies from year to year,

groundwater levels can fluctuate by as much as 19 feet over the period of a few years. Both the JTD and the EIR hypothesize that the riparian vegetation in the canyon bottom could be attributable to shallow groundwater. This model is counter to that proposed in the hydrogeologic evaluations in the JTD.

Alluvial Aquifer. The alluvial aquifer is present in the lower area of Gregory Canyon where it thickens northward and merges with the alluvial aquifer of the San Luis Rey River. The alluvium has an average thickness of 150 feet and a maximum thickness of 240 feet approaching the San Luis River aquifer. Depth to groundwater in the alluvial aquifer typically ranges from 20 to 40 feet below ground surface.

Fractured Bedrock Aquifer. Groundwater in the upper area of Gregory Canyon occurs predominantly in the upper, weathered portions of the bedrock units where interconnected fractures allow for groundwater movement. The piezometric surface in the bedrock aquifer has been estimated at depths of 20 to 70 feet below ground surface.

Additional monitoring wells and monitoring are required to provide groundwater gradient information and better define movement and occurrence of groundwater in Gregory Canyon, particularly in the canyon bottom where the future Landfill subdrain is to be located and the western flank of the canyon to determine whether additional detection monitoring will be required in this area.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: Finding No. 7

Comment:
Comment

This Finding should include some information on the hydrologic classification and the uses associated with the San Luis Rey Municipal Water District.

Proposed Revision/Addition to WDRs:

GROUNDWATER USE. Gregory Canyon is within the Pama Hydrologic Subarea of the San Luis Rey Hydrologic unit and has designated beneficial uses including municipal, agricultural and industrial. According to Appendix C of the JTD (Section 2.1.2) the Pala basin groundwater provides nearly all of the potable water supply for the Pala Indian Reservation, the SLRMWD and for other municipal and agricultural purposes within the basin. Approximately 17 domestic wells and 31 irrigation wells are located within one mile of the Gregory Canyon Landfill. The majority of irrigation wells are located in the alluvial basin of the San Luis Rey River where orchards exist in Rice and Couser Canyons. The San Luis Rey Municipal Water District maintains 4 wells within 1 mile of the mouth of Gregory Canyon, three of which are in a downgradient direction from the confluence of Gregory Canyon and the San Luis Rey River.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: G.2**Comment:**

Cover

There are discrepancies with the design of the final cover. Section E.1.3.1.2 of the JTD describes the final cover as consisting (from top to bottom) of two feet of vegetative cover, an HDPE (High Density Polyethylene) drainage layer (on the top deck only), a 60 mil LLDPE (Low Linear Density Polyethylene) geomembrane, and two feet of foundation layer. Section G.2 of the Tentative WDRs describes the cover as consisting (from top to bottom) of one foot of vegetative cover, two feet of clay, and two feet of foundation soil. Title 27 (§ 21090) requires that the permeability of the final cover be at least equal to that of the bottom liner system. The cover described in the WDRs does not meet this regulatory requirement and no engineering analysis to demonstrate equivalence of the final cover described in the WDRs is available. Furthermore, the final cover proposed in the JTD may not even to meet the Title 27 requirements that the cover be less permeable than the underlying liner system; a double composite liner system with two geomembranes, a geocomposite clay liner, and two feet of clay.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: G.2**Comment:**

Comments On Order 2:

The proposed final cover consisting of 2 ft of foundation, 2 ft of clay, and 1 ft of vegetation is in disagreement with the final cover proposed in the JTD which includes a geomembrane. This clay-based cover will not satisfy 2109 (a)(2) requiring that the hydraulic conductivity of the cover be less than that of "any bottom liner or underlying natural geologic materials, whichever is less".

There is a concern that clay covers in semi-arid and arid climate tend to dry, leading to the opening of cracks, especially under the expected large settlements possible.

The cover design should be revised and provided to the RWQCB for review and approval. The design should demonstrate that the final cover would provide the same or better level of protection against infiltration of water than the liner system provides against seepage loss. The design should also demonstrate the cover will be durable in the long-term, i.e. for over 60 years.

Change wording to read:

Prior to deposition of waste in the landfill the Discharger shall provide to the RWQCB Board for its approval following public notice and comment a final closure cover design that meets the requirements Title 27, Section 2109(a)(2) and is demonstrated to be durable for the long-term; and a period exceeding 60 years. Supporting test information and analyses shall be provided to demonstrate that these requirements can be met.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: H.8

Comment:

Comments On Order 8: CHANGE IN OWNERSHIP

In addition to the provisions for the transfer of the order, the discharger should also be required to place appropriate deed restrictions on the property title. These restrictions should prevent any future land use or activities that could jeopardize the integrity of the landfill.

The orders should be modified to include the following:

The appropriate deed restrictions shall be added to the property title prior to the start of construction of the Landfill. The RWQCB will be provided with the deed restriction language for approval.

Commenter: Susan Trager -- San Luis Rey Municipal Water District

Section: J

Comment:

“Final Engineering Specifications for Foundations/Subgrade and Liner System” The above activity should be completed before and approved by the RWQCB, not after construction.

“Work Plan for improving groundwater Detection Monitory Program” - Within 90-days of adoption of this order. This Work Plan and the associated work should be completed well before construction of the landfill starts in order to allow for time to install borings and wells and collect sufficient baseline data.

“Contingency Plan for management/and NPDES permitting of discharges of treated water” - Within 1 year of initiation of construction of the waste containment system for Phase 1 of the WMU.

These activities should be completed and approved before any waste is disposed of in the WMU.

Commenter: Laurel Tucker -- Private Individual

Section:

Comment:

As a native Californian, I have seen the Southern California of my youth gradually become one seemingly endless swath of development. I understand that growth is unavoidable, but the thought of a landfill being located near a major water source seems very ill-advised.

Commenter: Marijo Van Dyke -- Private Individual

Section:

Comment:

As a retired Senior Planner for the Governor's Office of Planning and Research, a long-time landuse planner for the City of Poway and as a member of the Sierra Club, I am asking that the Board to consider the CEQA information very carefully. Fractured granitic landforms carry away rain water in many directions and are almost impossible to seal properly for landfill purposes. In addition the operators of the proposed project have already disclosed that they intend to utilize green yard waste as a means of daily cover - a practice that has been discredited because of its production of methane gas.

So we have probable uncontrolled leachate at some future date leaving the fill site in unknown directions and unknown quantities once the liners fail, as they inevitably do. Entering the beneficial use basins that supply farms, homes and cities with potable water. The recovery processes proposed never work adequately and are not sufficient to be claimed as adequate mitigation under CEQA.

The danger to the water resources within the watershed of the proposed site are too great to allow this project to move forward. An appropriate landfill site needs to be identified and ultimately developed to serve the north San Diego county area, but this site is not it. Furthermore, green yard waste must be kept out of the landfills and composted separately to avoid the damage to the atmosphere that methane causes. Companies such as EDCO that collect trash for small cities like Poway, make money on the use of green yard waste as daily cover because they don't need to acquire fill dirt. It is however an out-of-date practice that must be curtailed, not extended to yet another brand new landfill.

I urge you to turn down the application for the Tentative Order for the Gregory Canyon Landfill.

Commenter: Gerald Walson -- Private Individual

Section:

Comment:

It appears that since Olivenhain Municipal Water District has withdrawn their commitment to supply water to Gregory Canyon, their EIR which tentative order R9-2009-004 was based on is invalid. Therefore, the tentative order should be cancelled and reconsidered when a new EIR becomes available.

Commenter: Gerald Walson -- Private Individual

Section:

Comment:

It is inconceivable that the RWQCB would consider granting a permit to Gregory Canyon without analyzing the impact and ramifications of a spill contaminating the basin aquifers.

If the aquifer is contaminated how will it be cleaned and at what cost?

It appears that the RWQCB doesn't have a clue as to how to address this issue. The RWQCB should consider three scenarios, mild contamination, moderate contamination, and severe contamination. Failure to consider the ramifications of a basin contamination would be a severe dereliction of the Agencies responsibility.

Commenter: Gerald Walson -- Private Individual

Section:

Comment:

Since the discharger is responsible for providing replacement water to all parties impacted by a spill, it is mandatory that this plan be available before any permits are approved. Given the severe water crisis that we are in and given that the prolonged drought is predicted to exist into the future, it is mandatory that a secure water source be identified and obligated as required before any permits are issued.

Commenter: Sheila Walson -- B.A.R.C.

Section:

Comment:

When Gregory Canyon fails and loses the San Luis Rey aquifer, it has never been stated how the river is going to be cleaned up and at what cost.

Gregory Canyon is required to supply water to all users impacted by any Gregory Canyon failures. They have never said where they're going to get this water from. That's got to be resolved.

Commenter: Sheila Walson -- B.A.R.C.

Section:

Comment:

Where will the replacement water come from? This issue needs to be resolved.

Commenter: Gerald Walson -- Private Individual

Section:

Comment:

Another glaring deficiency is the notification time to impacted users. all users should be notified within 24 hours any time the discharger concludes that a release has proceeded beyond the facility boundaries so that they may take appropriate action. Failure to notify these user's timely may put them at risk.

Commenter: Gerald Walson -- Private Individual

Section:

Comment:

Who and how is monitoring being conducted and on what kinds of waste that are being dumped?

Commenter: Gerald Walson -- Private Individual

Section: A.6

Comment:

Since most people agree that the dump will fail at some point and that since this is a relatively new process in an extremely sensitive area these records should be maintained for at least 20 years. Only in hindsight may one be able to determine that an event was missed that should have been detected.

Commenter: Gerald Walson -- Private Individual

Section: D

Comment:

Any evidence of a release should be reported immediately.

Commenter: Gerald Walson -- Private Individual

Section: D.6

Comment:

Who is monitoring the compliance for erosion control? i.e. that necessary erosion control is being implemented timely.

Commenter: Gerald Walson -- Private Individual

Section: Finding No. 14

Comment:

What is the size of the storage tank?

Commenter: Gerald Walson -- Private Individual

Section: Finding No. 23

Comment:

What are the financial assurances and how were they determined?

Commenter: Gerald Walson -- Private Individual

Section: Finding No. 3

Comment:

How will waste content be inspected for allowable waste?

Commenter: Gerald Walson -- Private Individual

Section: Finding No. 6

Comment:

Where are all the aquifers in the SLR River basin identified and described?

Commenter: Gerald Walson -- Private Individual

Section: Finding No. 7

Comment:

Where are all the Wells identified that can be impacted by a spill from Gregory Canyon? All downstream Wells to the ocean need to be identified.

Example, the city of Oceanside and numerous other wells in the River downstream could be contaminated by a spill.

Commenter: Gerald Walson -- Private Individual

Section: G.2

Comment:

All users should be notified within 24 hours any time the discharger concludes that a release has proceeded beyond the facility boundaries. All users in the area or down stream should be notified of this occurrence so that they may take appropriate action. Failure to notify these user's may put them at risk.

Commenter: Gerald Walson -- Private Individual

Section: H.12

Comment:

Where are all the Wells in the San Luis Rey in the vicinity of Gregory Canyon and downstream to the ocean identified? Since the discharger shall provide replacement water to all affected

parties, it is mandatory that this plan be available before any permits are approved. Given that the state is in a serious prolonged drought that is predicted to exist into the future, it is mandatory that a secure water source be identified and obligated as required before any permits are is

Commenter: Gerald Walson -- Private Individual

Section: I.7

Comment:

Before any change in ownership is allowed to occur, the RWQCB must verify that the new owner is capable of assuming the necessary obligations.

Commenter: Gerald Walson -- Private Individual

Section: I.9

Comment:

The discharger shall report any noncompliance which may endanger human health or the environment within 24 hours from the time the owner becomes aware of the circumstances. The discharger may not know for some time that this event has occurred. What is the probability of determining that such an event has occurred timely.

Commenter: Gerald Walson -- Private Individual

Section: Technical Report

Comment:

This description has numerous errors that were pointed out at the workshop and should be corrected.

Commenter: Jeri Walz -- Private Individual

Section:

Comment:

I wish to express my opposition to the Tentative Order No. R9-2009-004 Waste Discharge Requirements for the Gregory Canyon Ltd Gregory Canyon Landfill.

I would like to urge the Board not to adopt it because eventually the landfill will leak, contaminating and ruining the precious natural water resources in the San Luis Rey River and many wells in the area. It makes no sense to sacrifice these natural water resources for the landfill.

Commenter: John Weil -- San Diego County Board of Supervisors

Section:

Comment:

Landfill liners leak.

Commenter: John Weil -- San Diego County Board of Supervisors

Section:

Comment:

The proposed landfill poses a threat to water quality of the San Luis Rey River.

Commenter: Ken Weinberg -- San Diego County Water Authority

Section:

Comment:

The Gregory Canyon Landfill Project poses substantial risk to Water Authority pipeline facilities unless appropriate protective measures are implemented. The Water Authority First Aqueduct, consisting of two existing (and one approved, but not yet constructed) high capacity pipelines, is immediately adjacent to the landfill footprint and the larger soil borrow/stockpile area. The project proponent has repeatedly stated that the project will not significantly affect the aqueduct, but has yet to adequately address potential impacts that could threaten the aqueduct's structural integrity and, consequently, the water delivery system for the entire San Diego region. Proposition C, which authorized the landfill, required the protection of Water Authority pipelines in a manner acceptable to the Water Authority. The Water Authority does not have sufficient information to concur that the current project design adequately protects the First Aqueduct. Absent a detailed and comprehensive investigation, which conclusively demonstrates that the project has no feasible potential for damage to the pipelines and water supply, it is imperative that, as a condition of any project approval, provisions be made for the relocation or encasement of the First Aqueduct to the satisfaction of the Water Authority.

Possible impacts and issues of concern to the Water Authority regarding this project include: (1) overloading or overstressing pipelines beneath the access roads; (2) exposure of pipelines along the riverbed due to the cumulative effects of streambed alteration; (3) damage to pipelines from vibration as a result of blasting; (4) degradation of pipelines from contact with corrosive landfill leachate and landfill gas; (5) effects of slope instability on pipelines; and (6) damage to the landfill from a rupture in one or more pipelines. The Water Authority is also concerned that construction of the access road, bridge, and the realignment of SR-76 may aggravate siltation along the river, cause imbalance in river morphology and increase erosion, which would in turn jeopardize the integrity of the Water Authority pipelines crossing the riverbed.

A failure of the aqueduct could also be caused by landfill construction or operations, such as blasting, seismic events, slope failure or accidental heavy truck crossing. Failure of one or more pipelines could cause significant erosion damage and transport landfill trash and soil into the San Luis Rey River drainage, saturate the trash, and overwhelm the leachate control and recovery system, as well as the subdrain system.

On-site drainage control must include sufficient provisions for the capture and recovery of all aqueduct water released as a result of pipeline(s) rupture.

The Water Authority requests the following requirement be incorporated in any project approvals:

Prior to commencement of construction, the Regional Board will be provided an executed written agreement between the Discharger and the San Diego County Water Authority stating that the San Diego County Water Authority Aqueduct pipelines have been protected to the extent and manner as required by the San Diego County Water Authority. All costs to protect the pipelines, including relocation or encasement as determined necessary by the San Diego County Water Authority, will be the responsibility of the Discharger.

If the aqueduct is properly protected, and pipeline and river crossings properly designed and constructed, the Water Authority's concerns regarding potential impacts due to the proximity of the aqueduct to the landfill project footprint would be addressed.

Commenter: Ken Weinberg -- San Diego County Water Authority

Section:

Comment:

As noted in the Tentative Order, the Gregory Canyon landfill project poses substantial risk to surface and ground water resources in the San Luis Rey River watershed. This river system currently provides water for a multitude of domestic and agricultural uses. Consequently, existing water quality or quantity must not be impaired. Planned uses of this basin will expand local water supplies, thus helping to alleviate chronic regional water shortage conditions expected in the future. Ground water sites in San Diego County are very rare, precious, and irreplaceable. These basins are a significant water resource for the San Diego region.

Construction and operation of the landfill could alter the behavior of the deeper, underlying bedrock. Eventual fracturing and weathering of deeper bedrock after landfill overburden is removed could produce preferential fracture zones and lead to increased groundwater infiltration and unanticipated groundwater flow pathways beneath the landfill. Additional fracturing of the bedrock material from blasting could also result in increased groundwater infiltration and unanticipated groundwater movement beneath the landfill.

Notwithstanding project proponent claims that this will be the most advanced Class III landfill facility ever constructed, the potential exists for leachate to leak regardless of the double composite liner, leachate collection and recovery, subdrain, and contingency water treatment systems. Leachate release from defects in the liner or any of the other containment systems could adversely impact the groundwater supply in the Pala Hydrologic Subarea alluvial aquifer. History is replete with construction of landfills that were "state-of-the-art" for their time, but

which subsequently leaked. This landfill represents a very real threat to municipal drinking water in this part of the County.

Although imported water supplies have historically formed the majority of water used to meet regional water demands, local surface and ground water resources in San Diego County remain an integral element of future water supply reliability. Ongoing drought, court orders, expected population growth, and climate change uncertainty all provide significant challenges to meeting future water needs. Every local supply option must be maximized to help ensure these water needs can be met. The region simply cannot afford to lose a single local water source to contamination; especially not a water source that is currently in use and has plans for expansion. Projects or activities that can jeopardize our local water resources need to be very carefully scrutinized before being allowed to proceed. Once the damage is done, it is almost impossible to rectify.

The Water Authority appreciates the opportunity to provide comments on the Tentative Order. As part of its risk assessment in determining whether to approve this project, the Regional Board must carefully consider not only the probability of failure, but also the magnitude of failure, and the long-term implications to regional water resources. The Regional Board must condition the project in a manner that ensures that down gradient contamination that could impact municipal and agricultural water supplies will not occur. In the absence of such guarantees, feasible replacement water supplies must be identified or the project cannot be allowed to proceed.

Commenter: Ken Weinberg -- San Diego County Water Authority

Section:

Comment:

The Tentative Order includes measures to address contamination of downstream wells after the landfill has leaked and has impacted a portion of the aquifer. However, by the time the effects of leachate contamination are identified in down-gradient wells, the aquifer would already be impacted, possibly resulting in well closures and the loss of local supply. Contamination of the aquifer would continue into the future, as would required treatment and disposal of impacted well water. The project should not proceed unless the Regional Board can ensure that any landfill leakage will not alter the quality or quantity of these important water resources.

Commenter: Ken Weinberg -- San Diego County Water Authority

Section: H.12

Comment:

The Tentative Order requires the project proponent to provide a replacement water supply for impacted wells. However, no details of the feasibility or the source for this "alternate" supply have been described or analyzed. Remarkably, the Water Replacement Contingency Plan is not even required for one full year after landfill construction begins. Further, it is likely that any Water Replacement Contingency

Plan will be required to undergo its own CEQA analysis, further extending the period of water supply uncertainty. Placing local water resources at risk by relying on an undefined and speculative replacement water supply is insufficient to ensure the health and safety of current water users. Given the current water supply situation, the Water Authority cannot guarantee that existing uses can be replaced if the aquifer and surface waters are contaminated. The project should not proceed unless the Regional Board can ensure that a proposed replacement water supply is viable and will fully offset the loss of water resources resulting from landfill leakage.

The continued protection and preservation of these local water resources must be the Regional Board's top consideration in evaluating the landfill project. The San Luis Rey watershed not only currently provides an irreplaceable water supply, but has potential to be expanded for storage and additional supplies in the future. If the Regional Board cannot ensure the protection of these essential local water resources, the project should not proceed.

Commenter: Joy Williams -- Environmental Health Coalition

Section:

Comment:

The frequency of monitoring requirements listed in the Monitoring and Reporting Program (M&RP) should be increased, given the unique site characteristics for the project. Additionally, to ensure accurate and unbiased monitoring activities, R WQCB or another appropriate Public Agency should be responsible for all monitoring activities. Associated costs of such monitoring should be incurred by the Discharger.

Commenter: Joy Williams -- Environmental Health Coalition

Section:

Comment:

The location of the proposed Gregory Canyon landfill project site is unacceptable for a Class III municipal solid waste landfill due to its consideration as an important and sacred cultural resource for the Pala band. This is an important environmental justice consideration in the siting of this landfill; as noted above. CalEPA's Environmental Justice guidelines require California environmental regulatory agencies to incorporate environmental justice considerations into their permitting and siting decisions.

Commenter: Joy Williams -- Environmental Health Coalition

Section:

Comment:

The location of the proposed Gregory Canyon landfill project site is unacceptable for a Class III municipal solid waste landfill due to its close proximity to the San Luis Rey River and 100-year and 500-year floodplain. The proposed project is located adjacent to the San Luis Rey River. Landfills should not be located next to a river due to the fact that over time, all natural

watercourses have the potential to migrate from their current watercourse. In the long-term, placing a landfill adjacent to a river increases the susceptibility for erosion and associated water contamination in the long-term. Additionally, EHC understands the proposed project site is located within a 100-year and 500-year flood plain, although the landfill footprint is not directly within these areas. A municipal landfill should not be located on a project site that has ANY area located within a floodplain. The San Diego County Siting Element specifically states that "Class III landfills cannot be sited within a 100-year floodplain". In addition to the project site being located within a flood plain, the San Diego County Water Authority pipelines 1 and 2 are also in the project vicinity. In the event a rupture of these pipelines occurs, the project site could be impacted. Additionally, global climate change has created increased uncertainty related to predicting climatic events and flooding. Areas suitable for landfills include site locations throughout the County that are not within floodplains or adjacent to rivers.

Commenter: Joy Williams -- Environmental Health Coalition

Section:

Comment:

The location of the proposed Gregory Canyon landfill project site is unacceptable for a Class III municipal solid waste landfill due to its close proximity to beneficial surface and groundwater sources. The San Luis Rey River and watershed serves a variety of existing and potentially beneficial uses to the citizens of San Diego County, including providing water supply for the Pala band, San Luis Rey Municipal Water District, City of Oceanside, County Water Authority and private agricultural users. The existing drought conditions of Southern California, and water importation cutbacks, required from court cases such as the Delta Smelt ruling, make it even more vital to protect the existing and potential water supply sources that exist within the region. Landfills have high potential to pollute surface and groundwater resources, regardless of engineering specifications. Currently, 7 landfills are listed as Superfund sites in Region 9 alone of the Environmental Protection Agency (Environmental Protection Agency. Region 9 Superfund site list. Accessed on 7.5.09. Available at <http://yosemite.epa.gov/r9/sfund/r9sfdocw.nst/vwsoalphabetical?openview>) . Additionally, the San Diego County 2005 Siting Element (San Diego County. Integrated Waste Management Plan. Countywide Siting Element. 2005 5-year revision final) specifically states that in regards to landfill location, "sites with poor groundwater are more desirable than sites with good water quality". The San Luis Rey watershed serves as an important existing and future water supply source for the San Diego region. A more appropriate location for a landfill would be in a location where groundwater and surface water resources are not such a vital component to potable water supply of San Diego County. It is not clear why RWQCB supports the location of a municipal landfill in an area where water quality is difficult to monitor and where surface and groundwater are regularly used for agricultural and municipal purposes.

Commenter: Joy Williams -- Environmental Health Coalition

Section:

Comment:

The location of the proposed Gregory Canyon Landfill is in an area that will contribute to the inequitable environmental burdens borne by San Diego residents who are nonwhite and economically disadvantaged. CalEPA and its member agencies, including the State Water Resources

Control Board/Regional Water Quality Control Boards (the Boards) have adopted an Environmental Justice Intra-Agency Strategy and an Environmental Justice Action Plan that commit the agencies to pursuit of environmental justice in all their actions. State and Regional Boards have developed four environmental justice program goals, which are:

1. Integrating EJ considerations into the development, adoption, implementation and enforcement of Board decisions, regulations and policies.
2. Promoting meaningful public participation and community capacity building to allow communities to be effective participants in Board decision-making processes.
3. Working with the Office of Environmental Health Hazard Assessment to improve research and data collection in communities of color and low-income populations.
4. Ensuring effective cross-media coordination and accountability when addressing environmental justice issues.

The first goal, that of integrating EJ considerations into the development, adoption, implementation, and enforcement of Board decisions ~ regulations, and policies, very clearly applies to all regulatory actions regarding the proposed landfill at Gregory Canyon. The proposed dump raises serious environmental justice concerns. The landfill would be located immediately adjacent to the Pala reservation, home to 600 people, in a rural census tract, which, according to the 2000 Census, is 61 % nonwhite. The final EIR finds that the dump will have environmental impacts that are significant and unremediable, including air quality, noise, traffic, vibration, and aesthetics. All this is sufficient to establish that the proposed landfill is an environmental justice issue. Of the five existing operating landfills within San Diego County, three (Otay, Borrego Springs, and Miramar) are located in zip codes that have poverty levels which exceed the national average' (Based on 2000 Census data. Compiles and presented by ZIPskinny demographics. Accessed on 7.6.09. Available at: <http://7.ipskinny.com>). Of the three landfill projects proposed to accommodate the future solid waste needs of San Diego County (existing Sycamore landfill expansion, new Campo Landfill and new Gregory Landfill), 2 (Gregory Canyon and Campo) are located in zip codes with poverty levels that exceed the national average. Within San Diego County, 5 of the 7 existing or proposed public municipal landfills are located in zip codes with poverty levels that exceed the national average. To further our point, the average percentage of white persons in San Diego County is 79.6' (U.S. Census Bureau. State & County Quick Facts. Accessed on 7.7.09. Available at: <http://quickfacts.census.gov/qfd/states/06/0607.html>). Of the 7 existing or proposed public municipal landfills, 6 are located in zip codes where the average percent of white persons is below the County average (Based on 2000 Census data. Compiles and presented by ZIPskinny demographics. Accessed on 7.6.09. Available at: <http://zipskinny.com>). EHC urges the RWQCB to acknowledge this disproportional siting of public municipal solid waste facilities by rejecting any approvals, permits, requirements or programs associated with the proposed Gregory Canyon landfill.

Commenter: Joy Williams -- Environmental Health Coalition

Section:

Comment:

The location for the proposed Gregory Canyon landfill project is unacceptable for a Class III municipal solid waste landfill due to the underlying hydrogeology. This finding is confirmed by the information contained in the RWQCB Technical Report (Staff Report)' (California Regional Water Quality Control Board. Order No. R9-2009-0004 for Gregory Canyon LTD. Proposed Gregory Canyon Landfill. San Diego County Technical Report (Staff Report). 2009. Available at: http://www.waterboards.ca.gov/sandiego/water_issues/programs/land_discharge/docs/gregory_canyon/GC_Lstaffrpt.pdf). The Staff Report states that the geologic units underlying the proposed landfill footprint include alluvial, weathered bedrock and unweathered fractured bedrock aquifers. The Staff Report further states that fractured bedrock aquifers are unique in that groundwater flow is directed by the rock fractures, and groundwater flow in fractured bedrock aquifers is extremely difficult to predict with confidence. Page 23 of the Staff Report further states that "the unpredictability of fracture location and groundwater flow imparts additional uncertainty in the effectiveness of detection monitoring systems for groundwater in fractured rock aquifers". EHC urges RWQCB to reject any approvals, permits, requirements or programs associated with the Gregory Canyon Landfill project because 1) RWQCB cannot determine if the proposed groundwater detection monitoring network will comply with the performance requirements of various State and federal regulations (page 23 Staff Report); and 2) Discharges of pollutants are difficult to detect, delineate, and remediate in fractured rock aquifer in a short period of time. (Page 24 of Staff report).

Commenter: Joy Williams -- Environmental Health Coalition

Section: D.2

Comment:

Load check programs typically rely on simple visual inspection of incoming loads and are not able to keep more than a fraction of hazardous items out of landfills. The discharger should be required to develop an effective load check program and documentation of its effectiveness in keeping prohibited waste out of the landfill.

Commenter: Joy Williams -- Environmental Health Coalition

Section: D.6.c

Comment:

The requirements associated with the implementation of necessary erosion control measures, construction, maintenance, or repair of precipitation and drainage control facilities should be increased from annually to monthly, at a minimum. The potential adverse impacts associated with a failure in the surface drainage system warrant a precautionary, rather than reactive, approach to landfill maintenance. Due to the unique site characteristics of this proposed project, all regulatory requirements should be exceeded, rather than simply met. Additionally, the RWQCB or other appropriate Public Agency should be responsible for the

implementation of all monitoring of landfill systems, to ensure an unbiased evaluation of project operations. Fees associated with any Public Agency monitoring should be at the expense of the Discharger.

Commenter: Joy Williams -- Environmental Health Coalition

Section: D.8.a

Comment:

Due to unique site characteristics, annual testing of the LCRS system as currently listed is inadequate. Requirements should be increased to monthly submittals and a Public Agency should be responsible for the implementation of monitoring. Fees associated with any Public Agency monitoring should be at the expense of the Discharger.

Commenter: Joy Williams -- Environmental Health Coalition

Section: E.1

Comment:

Due to unique site conditions, precipitation and drainage facilities should be required to accommodate precipitation from a 48 hour storm with a 500-year return frequency. Requirements per CCR Title 27 Section 20260 (c) should be exceeded, rather than simply met.

Commenter: Joy Williams -- Environmental Health Coalition

Section: Finding 14

Comment:

The GAC system capabilities should be expanded beyond VOCs and TDS to include to all pollutants potentially associated with solid waste landfills, such as iron, manganese, selenium, VOCs, perchlorate, boron and MBTE. Under no circumstances should treated water of any kind be discharged into the San Luis Rey River, a beneficial source of municipal water.

Commenter: Joy Williams -- Environmental Health Coalition

Section: Finding 17

Comment:

Due to the unique site characteristics of the proposed project site for this landfill, EHC encourages the RWQCB to require the proposed project to exceed, rather than simply comply with, the groundwater monitoring performance requirements of CCR Title 27 for detecting release or discharge of waste constituents from the WMU into the groundwater within the fractured rock aquifer.

Commenter: Joy Williams -- Environmental Health Coalition

Section: Finding 19

Comment:

Due to the existing and predicted water shortages facing the Southern California region, RWQCB should require the development of a replacement water contingency prior to the issuance of any Waste Discharge Requirements. Due to the unique site characteristics, this project has an elevated risk for contributing undetectable contamination to surface and groundwater. To that extent, it is unrealistic to assume there are any adequate replacement water sources for private and public well owners in the case of water contamination. The water contingency plan should address the following users: Pala band, San Luis Rey Municipal Water District, City of Oceanside and the San Diego County Water Authority.

Commenter: Joy Williams -- Environmental Health Coalition

Section: Finding 23

Comment:

Does RWQCB anticipate the financial assurances required by CCR Title 27 Section 22112(a) to be sufficient enough to offset any potential impacts associated with groundwater or surface water contamination? The existing and future water users associated with this watershed include the San Luis Rey Municipal Water District, the City of Oceanside and the County Water Authority.

Commenter: Joy Williams -- Environmental Health Coalition

Section: Finding 24

Comment:

If the RWQCB issues Waste Discharge Requirements for the proposed project, it would appear that the Agency believes the benefits associated with the construction of a 30-year landfill outweighs the benefits for securing a uncontaminated, quality, long term water supply for municipal and agricultural uses. Please justify why the RWQCB endorses projects with high uncertainties associated with groundwater quality testing in areas heavily relied upon for municipal and agricultural water resources.

Commenter: Joy Williams -- Environmental Health Coalition

Section: Finding 27

Comment:

EHC urges the RWQCB to join other local agencies in the denial of respective project approvals, permits, requirements or programs.

Commenter: Joy Williams -- Environmental Health Coalition

Section: Finding 6

Comment:

As stated above, both the County of San Diego and the RWQCB acknowledge that the local hydrogeology of Gregory Canyon includes fractured bedrock aquifer, which is generally considered unsuitable for the location of municipal landfills due to difficulties associated with water quality testing. Based upon this information, please explain why RWQCB believes the design and location of the proposed Gregory Canyon Landfill project is suitable.

Commenter: Joy Williams -- Environmental Health Coalition

Section: G.5

Comment:

Post-closure maintenance and monitoring should be implemented by the RWQCB or other appropriate Public Agency. Fees associated with such monitoring should be at the expense of the Discharger.

Commenter: Joy Williams -- Environmental Health Coalition

Section: H.12

Comment:

Due to unique site characteristics, the Discharger should be required to provide the RWQCB with a Water Replacement Contingency Plan prior to construction of the proposed project.

Commenter: Joy Williams -- Environmental Health Coalition

Section: H.20

Comment:

EHC urges the RWQCB to reject the proposed Order.

Commenter: Joy Williams -- Environmental Health Coalition

Section: H.4

Comment:

The Discharger should establish adequate assurances of financial responsibility for implementation of corrective action in response to a release of waste constituents prior to construction of the proposed project. Additionally, given the unique site characteristics, it appears the estimated cost for corrective actions for reasonably foreseeable releases is

insufficient to offset any potential impacts to agriculture or municipal water systems. Please provide justification behind the estimate cost for corrective actions.

Commenter: Joy Williams -- Environmental Health Coalition

Section: MRP B.11.a

Comment:

Monitoring and reporting requirements for the primary LCERS should be increased from annual to quarterly, due to unique site characteristics.

Commenter: Joy Williams -- Environmental Health Coalition

Section: MRP B.12

Comment:

Due to unique site characteristics, sampling of all Monitoring Points and Background Monitoring Points for each monitored medium for all COCs should occur annually, rather than in 5-year increments.

Commenter: Joy Williams -- Environmental Health Coalition

Section: MRP B.12.i.

Comment:

To ensure accurate testing, the minimum number of sampling should be increased from one sample to three samples.

Commenter: Joy Williams -- Environmental Health Coalition

Section: MRP B.13.a

Comment:

Due to unique site characteristics, site inspections should be required, at a minimum, to occur monthly.

Commenter: Joy Williams -- Environmental Health Coalition

Section: MRP B.2

Comment:

The monitoring parameters listed for water samples should be increased to include all pollutants typically associated with municipal landfills, including: fluoride, iron, manganese, selenium, VOCs, perchlorate, boron and MBTE. Appendix II constituents should be listed in

this table rather than referenced from another document. Due to unique site characteristics, the frequency of testing should be increased to monthly periods rather than quarterly.

Commenter: Joy Williams -- Environmental Health Coalition

Section: MRP B.8

Comment:

Due to unique site characteristics, surface water monitoring requirements should be increased from a quarterly period to a monthly period.

Commenter: Joy Williams -- Environmental Health Coalition

Section: MRP D.1.a

Comment:

To assist in protecting the health of the public, the Discharger should be required to notify the RWQCB within 24 hours, rather than 3 days.

Commenter: Joy Williams -- Environmental Health Coalition

Section: MRP F.1

Comment:

To assist in protecting the health of the public, the discovery of any previously unreported seepage of liquid waste of water from the WMA should be required within 24 hours, rather than 3 days.

Commenter: Joy Williams -- Environmental Health Coalition

Section: MRP G.1

Comment:

To assist in protecting the health of the public, notification in the event of a release beyond the facility boundary should be increased to property owners and residents located within 1 mile of the boundary of the facility.

Commenter: Joy Williams -- Environmental Health Coalition

Section: MRP G.2 and G.3

Comment:

To assist in protecting the health of the public, the requirement of 14 days should be replaced with 2 days.

Commenter: Joy Williams -- Environmental Health Coalition

Section: MRP J. Reporting Schedule

Comment:

We suggest the following changes to the Report Frequency in the table listed on this page.

Report Type	Report Frequency
Water Quality Monitoring	Monthly
Water Quality Monitoring	Monthly
Water Quality Monitoring	Monthly
Storm Water Pollution Prevention Plan	Monthly
Mitigation Monitoring	Monthly
Leachate Monitoring	Monthly
Leachate Retest	Monthly (if necessary)
COC Report	Monthly for the First 5
years	
COC Report	Monthly for the Second
Five years	
Final Engineering specifications	No change
CQA Final Report	No change
Erosion Control Report for Implementation of BMPs	Monthly
Replacement Water Contingency Plan	Updated every 5 years
Work plan for Improving Groundwater Detection Monitoring Program	Annually
Work plan for improving Surface Water Detection Monitoring Program	Annually
Report on Analysis of Well held Protection Areas	Annually
Contingency Plan for management/and NPDES permitting of discharges of treated water	Updated every 5 years
Recycled Water	Monthly

Commenter: Judith Withers -- Private Individual

Section:

Comment:

I continue to be astounded, especially in these modern times that as a species we continue to "foul our nests" thereby NOT insuring the continuing health and welfare of our kind. There seems to be a distinct disconnect between what is a sound idea and how much a private corporation has already spent on an idea that is not.

We have always known that San Diego is a desert region and water has always been an issue here. Putting a landfill that WILL eventually leak into the precious water table makes no sense. There are three aquifers and this area is pristine open space. This location is over fractured rock and there is no way to predict where the flow of liquids will go. This landfill will leak and

pollute this area and San Diego's water needs will be compromised because of this ill conceived idea and location.

I strongly urge the Board to reject finally this location and this idea . This country is so slow to take action due to bureaucracy that the entire North Pole will be melted and we will still be scratching our heads wondering why we did not do the right thing sooner. Here are some suggestions for reducing the waste in landfills: Ban all plastic and standardize all packaging. Use the new technologies that make disposables out of starches. I buy bio-bags and use them for waste. The bags are totally degradable. I am irritated every time I buy something that has packaging that is not recyclable. Our resources are dwindling. We need to change the way we do business and this will create new business and jobs that are truly green and help preserve our water table.

Please bring back true leadership, free of expectations of large Corporations who donate cash to the media, elected officials, even non-profits in order to garner support for projects like this that do not make sense.

Grouped Comments

Form Letter Regarding San Luis Rey Aquifer

Comment:

I am sending this letter to voice my strong opposition to the proposed Gregory Canyon landfill and to urge the Regional Board to reject the permit for the project. It would be wrong to place a garbage dump on the banks of a major river, and if approved this landfill will forever threaten valuable and decreasing water resources.

Taking into consideration California's ongoing drought it is inconceivable that the Regional Water Quality Control Board would approve construction of a landfill so close to the San Luis Rey Aquifer. Past landfill projects such as Las Pulgas and Poway landfill have shown that so called protective liners all fail eventually. This water source is much more valuable to southern California residences than a trash dump with a 30 year life span.

The Regional Board's duty is to protect water quality. But approving what surely would be the last landfill built in California next to a major river and valuable drinking water sources would violate that duty. Do not make this unneeded project the lasting legacy of this Regional Board.

Commenter's:

Irene Frantz, Melodie Perez, Susan Cratty, Angie Wolf, Peggy Smith, Louis Goldich, Stella Albright, Jason Albright, James Dean, Joelle Erb, Darrelle Stiles, Todd Williams, Jill Ward, Shannon Burns, Ricci Duro, Alexis Duro, James Brown, Barbara Brickhouse, Kelly Lucero, Marsha Harris, Bertha Young, Dave Young, Rigoberto Casillas, Frey Raab, Joe Iberri, Lettie May Gibbs, B.J. Skinner, Craig Harris, Harold Hunter, Jim Smith, Elfego Covarnibias, Jason King, Joshlynn Tanner, Paula Valeczuda, Carrie Castro, Melissa Raymond, Todd Ahrens, Athena Russell, Judith Alvarez, R. Leroy Wentz, Carmen Jungenberg, Michael Jungenberg,

Robin Carroll, Robert Aquayo, Thad Klimas, Marti Gonzales, Oletha Jean Dicks, Ralph Dicks, Mark Pliska, Lisa Woolly, John Sheridan, Tina Yates, Gary Mercer, Tashina Ornelas, Sandra Mack, Pearl Holliday, Dora Mora, Rolando Mondz, Abraham Leia, Nedra Horn, Sarah Kitzman, Jazmin Pauma

Form Letter Regarding Gregory Mountain

Comment:

I am sending this letter to voice my strong opposition to the proposed Gregory Canyon landfill and to urge the Regional Board to reject the permit for the project. It would be wrong to place a garbage dump on the banks of a major river, and if approved this landfill will forever threaten valuable and decreasing water resources.

A landfill at this site would also desecrate Gregory Mountain and Medicine Rock, sites sacred to Native Americans in southern California. Gregory Mountain, known in Luiseno as "Chokla," is one of the homes and resting places of Takwiic, an important spiritual figure to the Pala and all Luiseno people. At the base of the mountain lies Medicine Rock, a powerful spiritual site containing rock art figures from our ancestors. Medicine Rock is also the site of ceremonies and religious gatherings for the people. We cannot allow Chokla or the area around Medicine Rock to be desecrated by becoming the site of a trash dump. Building the Gregory Canyon Landfill would defile our sacred land, surrounding it with waste and impurity, and forever destroying it as a site of spiritual significance for us. This land means so much more to us than simply clean land, air, and water; it also means the spiritual survival of our people. There is no way to limit the impact of the project on these sacred sites.

The Regional Board's duty is to protect water quality. But approving what surely would be the last landfill built in California next to a major river and valuable drinking water sources would violate that duty. Do not make this unneeded project the lasting legacy of this Regional Board.

Commenter's:

Pamel Cervis, Jacqueline Withers, Tahirih Boisclair, Daniel Withers, Sandra Stoneburger, David Largo, Robert Seith, Annabel Munoz, Yolanda Mackenzie, Robert Mendez, Desiree Levy, Nikki Freeman, Rita Smith, Henry Contreras Jr., Russell Ronie, Paul Valenzuela, Michael Lang, Betty Valenzuela, Linda Nieto, Mel Vernon, Richard Mojado, David Duro Sr., Diana Duro, Roberta Estrada, Virginia Garcia, Michael Valdez, Tiffany Aguayo, Mary Lou Beltran, Deanna Subish, Michael Evans, Marian Walkingstick, Kriscinda Cagey, Fatima Canacho, Ted Ward, Citlalli Gonzalez, Ramona Greene, Alan Mojado, Theresa Nieto, Theresa Villa, LeRoy Riggs, Richard Stephens, Vincent Garcia, Melissa Munoz, JoAnn Smith, Cheryl Majel, Michelle Murillo, Debra Torres, David Duro Jr., Anna Rabago, Christina Rabago, M. Wren, Tessa Smith, Andrew Rocha, Anthony Catate, Shannen Magee, Christina Henry, Matthew Henry, Chantal Ostberg, Philip Fosselman, Marlene Fosselman, Ashleigh Skaggs, Dolores Color, Yvette Mendez, Bruce Guachino, Anita Rodriguez, R. Mel Lavato, Pam Chavez, M. Linton, Cleo Garcia, Lucinda Rangel, Antoinette Smith, Jeonnette Costa, Angela Garcia, Walda Smith, Cris Quintanar, Pearl Nejo, Janice Yazzie, Lucas Russell, Summer Lavato, Charles Hill, Angeline Levy, Grace Levy, Louann Levy, Lorne Levy, Issela Burns, Tiffany Ostberg, Bonnie Segundo, Howard Diaz

Form Letter #2 Against Tentative WDR

Comment:

I am very concerned that the proposed Gregory Canyon Landfill is adjacent to the San Diego Aqueduct and the San Luis Rey River and located over a valuable and irreplaceable aquifer. The aqueduct supplies the City of San Diego, the aquifer supplies irrigation and domestic water wells and the River provides water for the City of Oceanside's water recycling plant.

Despite project proponent assertions, it is very likely, due to geographic conditions in the area that the landfill will leak, resulting in contamination of valuable water resources. Stated mitigation measures are totally unacceptable.

The mission of your board is to preserve and enhance the quality of California's water resources for the benefit of present and future generations of Californians. Adoption of the Tentative Order for the dangerous proposed Gregory Canyon Landfill project would run counter this mission and put valuable water resources at peril. Please deny this dangerous project.

Commenter's:

Mike Munyer, Marisa Espinoza, Tom Schulz, Ana Zadeh, Liana Harlan, Anthony Abbott, Kevin Hawke, Christalle Bodiford, Julianne McCall, L. Jean Dunn, Jr., Roger Kube, Jessica White, Molly Parkan, Tony Larson, Jessica Logerberg, Elizabeth Taylor, Jon Carlos Senour, Bruce S. Allen, Lee Anne Davis, Kimberly Kurcab, Kathleen Baird, Thomas Haugh, Remus Leach, Paul Myers, Michael Greggs, Julie Gengo, Donna Lynn Wolf, Arleen Hammerschmidt, Adam Beamer, Justin Ricci, Jeff Fox, Linda Lyerly, Travis Newhouse, Brian Katz

Form Letter #1 Against Tentative WDR

Comment:

I am very concerned that the proposed landfill is adjacent to the San Luis Rey River and located over a valuable and irreplaceable aquifer. The aquifer supplies irrigation and domestic water wells and the River provides water for the City of Oceanside's water recycling plant.

Due to the location on fractured rock, the landfill will leak in due time despite the composite landfill liner and contaminate these valuable resources. The mitigation measure of filtering is not reliable.

Due to the unacceptable risk posed by the proposed Gregory Canyon Landfill, and the overarching need to protect water supplies in the face of a changing climate, please do not adopt the Tentative Order for the Gregory Canyon Landfill.

Commenter's:

Ruth Mattes, Jacqueline Arsivaud-Benjamin, Jon Vick, Frederick L. Rasp, Kenneth Weaver, Glenn Matayoshi, Jerri & Frank Patchett, Nina Karavasiles, Sandy Zelasko, Lael Montgomery, Dave Roberts, Andrew Kean, Dan Silver, Norma Denny, Carolyn Chase, Chris Klein, Charlene H. Orszag, Angela Goldberg, Pam Nelson, John Metzger, Nancy McCleary, Esther Olney,

David Grubb, Helen E. Moriarty, Lawrence M. Gartner, M.D., Joaquin Aganza, Helen M. Sanford, Paul Heirgston (illegible)

Form Letter #3 Against Tentative WDR

Comment:

I am very concerned that the proposed landfill is adjacent to the San Luis Rey River and located over a valuable and irreplaceable aquifer. The San Luis Rey River supports an important riparian habitat. The River provides City of Oceanside water for their potable water recycling plant. The aquifer provides irrigation and domestic water wells in the vicinity of the landfill. The landfill will leak in due time despite the composite landfill liner and contaminate these valuable resources.

The proposed landfill is on fractured rock. As your staff report states, predicting ground water flow in this fractured rock with any confidence is not possible. Consequently, predicting the direction of contaminated groundwater from a leak and filtering it to protect water quality of the surrounding aquifers with any confidence is not possible.

In my view, the proposed Gregory Canyon Landfill poses an unacceptable risk to these irreplaceable precious natural water resources and habitats. Protecting local water quality must override the benefits of the landfill especially as the expected impacts of climate change will make it more important to use our local water supply wisely.

I urge you not to adopt the Tentative Order for the Gregory Canyon Landfill.

Commenter's:

Nancy Bratakos, Jim Robinson, Lorrie Kern, Christine Misoni, John Teevan, Rocio E. Cordova, Sheri Vandeventer, Christopher F. del Riego, M. D., Joshua Helmle, Philip Kaushall, PhD., Keith Tannler, Susan McMullen, Jo Ann Pastori, James D. Oakes, Johnny Pappas, Jerry Hughes, Diana Schmidt, Susan Engle

Form Email - Save the San Luis Rey River Watershed

Comment:

I urge the Regional Board to oppose the Gregory Canyon Landfill project in northern San Diego County and to deny its pending permit application ("Waste Discharge Permit"). I am concerned the landfill would threaten several critical drinking water sources -- an underground aquifer, the aqueducts run by the county's water authority and the San Luis Rey River itself -- that serve thousands of residents and businesses throughout the region. Heavy rains, earthquakes or a number of other factors could cause the landfill's liner to break, which would result in the leaking of toxic chemicals and irreversible harm to these critical water resources.

The landfill also would threaten more than 1,700 acres of important wildlife habitat as well as sacred Native American lands, including Gregory Mountain and Medicine Rock, which are important spiritual sites for the Pala Band of Mission Indians.

Because of the unacceptable risks posed by the proposed Gregory Canyon Landfill, and the undeniable need to protect our precious water supplies and other natural resources in the face of an extensive drought and a changing climate, I urge the Regional Board NOT to grant the Waste Discharge Permit for the Gregory Canyon Landfill.

Commenter's:

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